WEBVTT

NOTE duration:"00:56:42"

NOTE recognizability:0.882

NOTE language:en-us

NOTE Confidence: 0.902285641666667

00:00:04.360 --> 00:00:05.878 So good to see you everybody.

NOTE Confidence: 0.902285641666667

00:00:05.880 --> 00:00:10.784 Welcome to our ChatGPT has arrived and

NOTE Confidence: 0.902285641666667

00:00:10.784 --> 00:00:14.475 I really have the honor of introducing 2

NOTE Confidence: 0.902285641666667

00:00:14.475 --> 00:00:16.960 faculty and two students who have really

NOTE Confidence: 0.902285641666667

00:00:16.960 --> 00:00:19.518 worked hard for the presentation today.

NOTE Confidence: 0.902285641666667

00:00:19.520 --> 00:00:22.052 Conrad Sefranek is an MD student

NOTE Confidence: 0.902285641666667

00:00:22.052 --> 00:00:23.740 interested in pursuing internal

NOTE Confidence: 0.902285641666667

00:00:23.812 --> 00:00:26.782 medicine and research regarding clinical

NOTE Confidence: 0.902285641666667

00:00:26.782 --> 00:00:29.158 applications of artificial intelligence.

NOTE Confidence: 0.902285641666667

00:00:29.160 --> 00:00:31.878 He graduated with honors from Stanford

NOTE Confidence: 0.902285641666667

00:00:31.880 --> 00:00:33.870 with ABS in Computational Biology

NOTE Confidence: 0.902285641666667

00:00:33.870 --> 00:00:36.445 and a minor in Management Science

NOTE Confidence: 0.902285641666667

00:00:36.445 --> 00:00:38.638 and Engineering at Stanford's.

NOTE Confidence: 0.902285641666667

00:00:38.638 --> 00:00:41.533 His research focused on applying

00:00:41.533 --> 00:00:43.896 machine learning algorithms to

00:00:43.896 --> 00:00:45.984 clinical decision support systems.

00:00:45.984 --> 00:00:47.840 And now at Yale,

00:00:47.840 --> 00:00:49.880 his research has focused on

00:00:49.880 --> 00:00:51.512 how large language models,

00:00:51.520 --> 00:00:53.959 such as what he's going to talk about today,

00:00:53.960 --> 00:00:57.336 ChatGPT can be applied both in the clinical

00:00:57.336 --> 00:01:00.439 practice and to augment medical education.

00:01:00.440 --> 00:01:04.395 And Elizabeth Sidiman Aristof is an MDPHD

00:01:04.395 --> 00:01:07.720 student intending to study how early life

00:01:07.720 --> 00:01:10.559 stress exposure alters neurodevelopment.

00:01:10.560 --> 00:01:14.039 She graduated summa *** laude from Princeton.

00:01:14.040 --> 00:01:17.400 She had an AB in Spanish and Portuguese

00:01:17.400 --> 00:01:20.000 and a certificate in neuroscience.

00:01:20.000 --> 00:01:22.760 She worked during her Princeton years,

NOTE Confidence: 0.902285641666667

00:01:22.760 --> 00:01:24.312 studying early life stress.

NOTE Confidence: 0.902285641666667

00:01:24.312 --> 00:01:27.153 And then she went to Boston Children's

NOTE Confidence: 0.902285641666667

00:01:27.153 --> 00:01:29.718 and conducted research on how

NOTE Confidence: 0.902285641666667

00:01:29.720 --> 00:01:31.571 children's environments influence

NOTE Confidence: 0.902285641666667

00:01:31.571 --> 00:01:34.039 their mental health outcomes.

NOTE Confidence: 0.902285641666667

00:01:34.040 --> 00:01:35.595 I'm so thrilled that they're

NOTE Confidence: 0.902285641666667

00:01:35.595 --> 00:01:36.839 both with us today.

NOTE Confidence: 0.902285641666667

00:01:36.840 --> 00:01:38.145 On this presentation,

NOTE Confidence: 0.902285641666667

00:01:38.145 --> 00:01:41.190 David Cartash is a lecturer in the

NOTE Confidence: 0.902285641666667

00:01:41.274 --> 00:01:43.450 section of Biomedical Informatics

NOTE Confidence: 0.902285641666667

00:01:43.450 --> 00:01:46.714 and Data Science at Yale University.

NOTE Confidence: 0.902285641666667

00:01:46.720 --> 00:01:48.940 His undergrad degree in Engineering

NOTE Confidence: 0.902285641666667

00:01:48.940 --> 00:01:51.160 Science in Electrical Engineering from

NOTE Confidence: 0.902285641666667

00:01:51.220 --> 00:01:53.805 the University of Western Ontario was

NOTE Confidence: 0.902285641666667

00:01:53.805 --> 00:01:56.830 specializing in biomedical signals and

NOTE Confidence: 0.902285641666667

00:01:56.830 --> 00:01:59.200 systems at the University of Toronto.

NOTE Confidence: 0.902285641666667

00:01:59.200 --> 00:02:02.466 He went on to earn a master's of Health

NOTE Confidence: 0.902285641666667

00:02:02.466 --> 00:02:04.154 Science in Clinical Engineering,

NOTE Confidence: 0.902285641666667

00:02:04.160 --> 00:02:06.662 focusing on the evaluation of the

NOTE Confidence: 0.902285641666667

00:02:06.662 --> 00:02:09.594 prediction of hospital decompensation events.

NOTE Confidence: 0.902285641666667

00:02:09.594 --> 00:02:14.613 He then obtained his PhD in Medical

NOTE Confidence: 0.902285641666667

00:02:14.613 --> 00:02:17.507 Informatics and Complex Systems

NOTE Confidence: 0.902285641666667

00:02:17.507 --> 00:02:21.359 Science from Indiana University,

NOTE Confidence: 0.902285641666667

00:02:21.360 --> 00:02:23.610 and he's been here working with

NOTE Confidence: 0.902285641666667

00:02:23.610 --> 00:02:26.280 us on many of these issues,

NOTE Confidence: 0.902285641666667

00:02:26.280 --> 00:02:27.582 Talan Wejesakara,

NOTE Confidence: 0.902285641666667

00:02:27.582 --> 00:02:31.156 an assistant professor on the Clinician,

NOTE Confidence: 0.902285641666667

00:02:31.156 --> 00:02:32.104 Educator, Scholar Track.

NOTE Confidence: 0.902285641666667

00:02:32.104 --> 00:02:34.000 I have to brag a little.

NOTE Confidence: 0.902285641666667

00:02:34.000 --> 00:02:38.158 He completed his master's in Health Science,

NOTE Confidence: 0.902285641666667

00:02:38.160 --> 00:02:39.012 medical education.

NOTE Confidence: 0.902285641666667

00:02:39.012 --> 00:02:41.994 He was part of our first cohort.

NOTE Confidence: 0.902285641666667

00:02:42.000 --> 00:02:44.238 He did his undergrad at Duke,

NOTE Confidence: 0.902285641666667

00:02:44.240 --> 00:02:46.963 and then he went to University of

NOTE Confidence: 0.902285641666667

00:02:46.963 --> 00:02:48.440 Rochester for his MD.

NOTE Confidence: 0.902285641666667

00:02:48.440 --> 00:02:51.443 He then came to Yale for his

NOTE Confidence: 0.902285641666667

00:02:51.443 --> 00:02:54.033 internship and residency and did a

NOTE Confidence: 0.902285641666667

00:02:54.033 --> 00:02:55.948 fellowship in the general internal

NOTE Confidence: 0.902285641666667

00:02:55.948 --> 00:02:57.833 medicine that's under Donna Windish.

NOTE Confidence: 0.902285641666667

00:02:57.840 --> 00:02:59.680 And I see that she's with us today.

NOTE Confidence: 0.970728641428571

00:03:02.320 --> 00:03:05.757 He's had a number of leadership positions.

NOTE Confidence: 0.970728641428571

00:03:05.760 --> 00:03:08.076 He's been the Course Director of

NOTE Confidence: 0.970728641428571

00:03:08.076 --> 00:03:10.863 Clinical Reasoning since 2017 and he's

NOTE Confidence: 0.970728641428571

00:03:10.863 --> 00:03:14.650 also an associate in our Center for

NOTE Confidence: 0.970728641428571

00:03:14.762 --> 00:03:17.972 Medical Education providing educator

NOTE Confidence: 0.970728641428571

00:03:17.972 --> 00:03:20.636 development on clinical reasoning.

NOTE Confidence: 0.970728641428571

00:03:20.640 --> 00:03:24.280 He's also an advisor to the clinical,

NOTE Confidence: 0.970728641428571

00:03:24.280 --> 00:03:27.730 the clinician educator distinction path for

NOTE Confidence: 0.970728641428571

00:03:27.730 --> 00:03:31.216 residents in the Department of Medicine

NOTE Confidence: 0.970728641428571

00:03:31.216 --> 00:03:34.002 and he is the Director of Performance

NOTE Confidence: 0.970728641428571

00:03:34.002 --> 00:03:36.080 Improvement for our medical students.

NOTE Confidence: 0.970728641428571

00:03:36.080 --> 00:03:37.992 And they've all put a lot of time

NOTE Confidence: 0.970728641428571

00:03:37.992 --> 00:03:39.828 and I'm really looking forward

NOTE Confidence: 0.970728641428571

00:03:39.828 --> 00:03:41.560 to hearing this presentation.

NOTE Confidence: 0.970728641428571

00:03:41.560 --> 00:03:43.120 We have so much to learn.

NOTE Confidence: 0.970728641428571

00:03:43.120 --> 00:03:45.328 So thank you very much for

NOTE Confidence: 0.970728641428571

00:03:45.328 --> 00:03:46.432 putting this together.

NOTE Confidence: 0.970728641428571

00:03:46.440 --> 00:03:48.040 I'll pass it over to you, thalan,

NOTE Confidence: 0.838594624545454

00:03:50.240 --> 00:03:52.578 and I will kick it off to

NOTE Confidence: 0.838594624545454

00:03:52.578 --> 00:03:54.480 Conrad and Anna Elizabeth.

NOTE Confidence: 0.94047038

00:03:56.000 --> 00:03:56.880 Hello, everybody.

NOTE Confidence: 0.94047038

00:03:56.880 --> 00:03:59.080 Thanks so much for coming.

NOTE Confidence: 0.94047038

00:03:59.080 --> 00:04:01.047 I'm sure many, if not all of

NOTE Confidence: 0.94047038

00:04:01.047 --> 00:04:02.878 you have heard of Chatcha BT,

NOTE Confidence: 0.94047038

00:04:02.880 --> 00:04:05.631 probably with a range of excitement to

NOTE Confidence: 0.94047038

00:04:05.631 --> 00:04:08.080 skepticism and maybe some apprehension.

NOTE Confidence: 0.94047038

00:04:08.080 --> 00:04:10.776 Today, we'd like to share with you our

NOTE Confidence: 0.94047038

00:04:10.776 --> 00:04:12.865 perspective as medical students on how

NOTE Confidence: 0.94047038

00:04:12.865 --> 00:04:15.400 Chatcha BT could and we argue should,

NOTE Confidence: 0.94047038

00:04:15.400 --> 00:04:19.480 be used to augment medical education.

NOTE Confidence: 0.94047038

00:04:19.480 --> 00:04:21.168 This is the accreditation

NOTE Confidence: 0.94047038

00:04:21.168 --> 00:04:22.434 and disclosure slide.

NOTE Confidence: 0.94047038

00:04:22.440 --> 00:04:24.078 I think there's information in the chat,

NOTE Confidence: 0.94047038

00:04:24.080 --> 00:04:27.394 but make sure you don't forget that overall,

NOTE Confidence: 0.94047038

00:04:27.394 --> 00:04:28.650 in this presentation we'll

NOTE Confidence: 0.94047038

00:04:28.650 --> 00:04:30.220 cover some context and recent

NOTE Confidence: 0.94047038

00:04:30.274 --> 00:04:31.919 research on large language models,

NOTE Confidence: 0.94047038

00:04:31.920 --> 00:04:34.200 followed by an exploration of its

NOTE Confidence: 0.94047038

00:04:34.200 --> 00:04:35.720 integration into medical education.

NOTE Confidence: 0.94047038

00:04:35.720 --> 00:04:37.862 And the second-half will focus on some

NOTE Confidence: 0.94047038

00:04:37.862 --> 00:04:40.224 ways that faculty may use these models

NOTE Confidence: 0.94047038

00:04:40.224 --> 00:04:41.954 to augment their teaching practices.

NOTE Confidence: 0.95927083375

00:04:43.760 --> 00:04:46.880 So this is a very basic neural network.

NOTE Confidence: 0.95927083375

00:04:46.880 --> 00:04:48.608 The idea is that there's an

NOTE Confidence: 0.95927083375

00:04:48.608 --> 00:04:50.639 input layer and an output layer,

NOTE Confidence: 0.95927083375

00:04:50.640 --> 00:04:52.662 and then a hidden layer that

NOTE Confidence: 0.95927083375

00:04:52.662 --> 00:04:54.200 does computation that gets a.

NOTE Confidence: 0.838938927777778

00:04:56.920 --> 00:04:59.176 The idea is that you can strengthen or

NOTE Confidence: 0.838938927777778

00:04:59.176 --> 00:05:01.167 weaken the connections between particular

NOTE Confidence: 0.838938927777778

00:05:01.167 --> 00:05:03.437 nodes based on prior experience,

NOTE Confidence: 0.838938927777778

00:05:03.440 --> 00:05:05.444 and this would be represented by

NOTE Confidence: 0.838938927777778

00:05:05.444 --> 00:05:07.479 changing the thickness of the arrows.

NOTE Confidence: 0.838938927777778

00:05:07.480 --> 00:05:10.035 And what we're doing then is altering

NOTE Confidence: 0.838938927777778

00:05:10.035 --> 00:05:12.026 the probability of a particular

NOTE Confidence: 0.838938927777778

00:05:12.026 --> 00:05:15.080 output being generated given an input.

NOTE Confidence: 0.838938927777778

00:05:15.080 --> 00:05:18.176 A deep neural network is a much more

NOTE Confidence: 0.838938927777778

00:05:18.176 --> 00:05:20.109 complicated version of this with

NOTE Confidence: 0.838938927777778

00:05:20.109 --> 00:05:22.275 more layers and non linear layers,

NOTE Confidence: 0.838938927777778

00:05:22.280 --> 00:05:24.380 and the computation of this goes way

NOTE Confidence: 0.838938927777778

00:05:24.380 --> 00:05:26.479 beyond the scope of our presentation.

NOTE Confidence: 0.838938927777778

00:05:26.480 --> 00:05:28.430 But it's important to understand

NOTE Confidence: 0.838938927777778

00:05:28.430 --> 00:05:30.456 the basics because ChatGPT and

NOTE Confidence: 0.838938927777778

00:05:30.456 --> 00:05:32.596 large language models broadly are

NOTE Confidence: 0.838938927777778

00:05:32.596 --> 00:05:35.678 a type of deeper neural network.

NOTE Confidence: 0.838938927777778

00:05:35.680 --> 00:05:37.940 So we're creating a probability

NOTE Confidence: 0.838938927777778

00:05:37.940 --> 00:05:39.748 distribution to understand not

NOTE Confidence: 0.838938927777778

00:05:39.748 --> 00:05:41.960 only the definitions of words,

NOTE Confidence: 0.838938927777778

00:05:41.960 --> 00:05:44.840 but also their usage in relation

NOTE Confidence: 0.838938927777778

00:05:44.840 --> 00:05:46.280 to other words,

NOTE Confidence: 0.838938927777778

00:05:46.280 --> 00:05:48.330 and this allows for the

NOTE Confidence: 0.838938927777778

00:05:48.330 --> 00:05:49.560 abstraction of information.

NOTE Confidence: 0.766717575833333

00:05:52.040 --> 00:05:55.432 O just to clarify, Chat GT stands for

NOTE Confidence: 0.766717575833333

00:05:55.432 --> 00:05:58.120 Chat generative retrained Transformer.

NOTE Confidence: 0.81636746375

00:05:59.920 --> 00:06:03.440 So ChatGPT is by no means in isolation.

NOTE Confidence: 0.81636746375

00:06:03.440 --> 00:06:05.232 I think it sparked a lot of people's

NOTE Confidence: 0.81636746375

00:06:05.232 --> 00:06:06.760 interest in large language models,

NOTE Confidence: 0.81636746375

00:06:06.760 --> 00:06:08.104 but it wasn't the 1st and

NOTE Confidence: 0.81636746375

00:06:08.104 --> 00:06:09.280 it's definitely not the last.

NOTE Confidence: 0.81636746375

00:06:09.280 --> 00:06:11.037 There are a ton of these new

NOTE Confidence: 0.81636746375

00:06:11.037 --> 00:06:12.399 models coming out right now,

NOTE Confidence: 0.81636746375

00:06:12.400 --> 00:06:13.572 and they're rapidly expanding

NOTE Confidence: 0.81636746375

00:06:13.572 --> 00:06:15.732 in terms of the size of the

NOTE Confidence: 0.81636746375

00:06:15.732 --> 00:06:17.437 models and and their performance.

NOTE Confidence: 0.81636746375

00:06:17.440 --> 00:06:18.959 This graph is already out of date,

NOTE Confidence: 0.81047613

00:06:20.880 --> 00:06:23.040 so it's important to note

NOTE Confidence: 0.81047613

00:06:23.040 --> 00:06:24.800 ChatGPT as I was explaining,

NOTE Confidence: 0.81047613

00:06:24.800 --> 00:06:27.620 was trained to produce plausible

NOTE Confidence: 0.81047613

00:06:27.620 --> 00:06:30.248 text using the probability it

NOTE Confidence: 0.81047613

00:06:30.248 --> 00:06:32.456 is not actually trained on what

NOTE Confidence: 0.81047613

00:06:32.456 --> 00:06:34.917 is true versus what is not true,

NOTE Confidence: 0.81047613

00:06:34.920 --> 00:06:37.960 and that means that it is capable of

NOTE Confidence: 0.81047613

00:06:37.960 --> 00:06:40.838 generating text that is fundamentally wrong.

NOTE Confidence: 0.81047613

00:06:40.840 --> 00:06:43.720 These have been termed hallucinations,

NOTE Confidence: 0.81047613

00:06:43.720 --> 00:06:46.177 and the reason that this is possible

NOTE Confidence: 0.81047613

00:06:46.177 --> 00:06:48.866 is because we're asking it to do next

NOTE Confidence: 0.81047613

00:06:48.866 --> 00:06:51.201 word prediction to give us a plausible

NOTE Confidence: 0.81047613

00:06:51.201 --> 00:06:53.679 string of text to answer a question,

NOTE Confidence: 0.81047613

00:06:53.680 --> 00:06:56.536 but it's not actually doing the cognitive

NOTE Confidence: 0.81047613

00:06:56.536 --> 00:06:58.799 task of answering that question.

NOTE Confidence: 0.81047613

00:06:58.800 --> 00:07:01.240 Additionally, ChatGPT does not have

NOTE Confidence: 0.81047613

00:07:01.240 --> 00:07:03.680 access to data behind paywalls,

NOTE Confidence: 0.81047613

00:07:03.680 --> 00:07:06.264 so it was trained on a huge volume

NOTE Confidence: 0.81047613

00:07:06.264 --> 00:07:08.039 of information on the Internet,

NOTE Confidence: 0.81047613

00:07:08.040 --> 00:07:10.278 but only that was freely available.

NOTE Confidence: 0.81047613

00:07:10.280 --> 00:07:13.960 The free version of Chat GPTGPT 3.5

NOTE Confidence: 0.81047613

00:07:13.960 --> 00:07:16.936 was not trained on data past 2021,

NOTE Confidence: 0.81047613

00:07:16.936 --> 00:07:20.968 and ChatGPT 4 was not trained on

NOTE Confidence: 0.81047613

00:07:20.968 --> 00:07:23.716 data past 2023, I believe April.

NOTE Confidence: 0.81047613

00:07:23.716 --> 00:07:26.110 So it's not browsing the Internet

NOTE Confidence: 0.81047613

00:07:26.188 --> 00:07:28.980 in real time or in our case reading

NOTE Confidence: 0.81047613

00:07:28.980 --> 00:07:31.554 scientific or medical literature that is

NOTE Confidence: 0.81047613

00:07:31.554 --> 00:07:33.353 coming out as it immediately comes out.

NOTE Confidence: 0.956336640666667

00:07:35.880 --> 00:07:38.080 So for a little bit more context there

NOTE Confidence: 0.956336640666667

00:07:38.080 --> 00:07:40.696 was a recent research study actually

NOTE Confidence: 0.956336640666667

00:07:40.696 --> 00:07:43.738 conducted at Yale looking at how ChatGPT

NOTE Confidence: 0.956336640666667

00:07:43.738 --> 00:07:47.019 this was the original base 3.5 model could

NOTE Confidence: 0.956336640666667

00:07:47.019 --> 00:07:50.246 perform on the USMLE exam and to sum it

NOTE Confidence: 0.956336640666667

00:07:50.246 --> 00:07:54.039 all up in one phrase it passed step one.

NOTE Confidence: 0.956336640666667

00:07:54.040 --> 00:07:55.714 That original base model which spiked

NOTE Confidence: 0.956336640666667

00:07:55.714 --> 00:07:58.509 sparked a lot of excitement and I think the

NOTE Confidence: 0.956336640666667

00:07:58.509 --> 00:08:00.520 medical community and the more recent update.

NOTE Confidence: 0.956336640666667

00:08:00.520 --> 00:08:03.192 So that was equivalent to you could argue

NOTE Confidence: 0.956336640666667

00:08:03.192 --> 00:08:06.080 about an M3 able to pass a step one exam.

NOTE Confidence: 0.956336640666667

00:08:06.080 --> 00:08:09.055 But these more recent GPT 4 which

NOTE Confidence: 0.956336640666667

00:08:09.055 --> 00:08:12.182 is open AIS latest model has been

NOTE Confidence: 0.956336640666667

00:08:12.182 --> 00:08:14.048 shown to achieve like greater than

NOTE Confidence: 0.956336640666667

00:08:14.048 --> 00:08:16.920 an 85% on all three-step exams.

NOTE Confidence: 0.956336640666667

00:08:16.920 --> 00:08:19.720 So this is performing at a pretty

NOTE Confidence: 0.956336640666667

00:08:19.720 --> 00:08:21.919 high percentile on these tasks.

NOTE Confidence: 0.954721763157895

00:08:25.520 --> 00:08:28.075 So to be clear, in this presentation

NOTE Confidence: 0.954721763157895

13

00:08:28.075 --> 00:08:30.754 we are not proposing using ChatGPT

NOTE Confidence: 0.954721763157895

00:08:30.754 --> 00:08:33.760 as the definitive source of truth,

NOTE Confidence: 0.954721763157895

00:08:33.760 --> 00:08:35.280 but rather as a tool.

NOTE Confidence: 0.954721763157895

00:08:35.280 --> 00:08:37.198 So think of it like a calculator.

NOTE Confidence: 0.954721763157895

00:08:37.200 --> 00:08:39.640 For doctors like a Wikipedia,

NOTE Confidence: 0.954721763157895

00:08:39.640 --> 00:08:42.600 you still need to understand the

NOTE Confidence: 0.954721763157895

00:08:42.600 --> 00:08:44.520 underlying computation of what

NOTE Confidence: 0.954721763157895

00:08:44.520 --> 00:08:46.920 you're entering into the calculator,

NOTE Confidence: 0.954721763157895

00:08:46.920 --> 00:08:48.000 but you don't necessarily

NOTE Confidence: 0.954721763157895

00:08:48.000 --> 00:08:49.960 need to do out all the math.

NOTE Confidence: 0.954721763157895

00:08:49.960 --> 00:08:51.976 So we equate using ChatGPT to having

NOTE Confidence: 0.954721763157895

00:08:51.976 --> 00:08:53.360 a conversation with a friend.

NOTE Confidence: 0.8291473925

00:08:56.160 --> 00:08:58.440 So then this next part of the presentation,

NOTE Confidence: 0.8291473925

00:08:58.440 --> 00:09:01.176 we're going to highlight a few use cases

NOTE Confidence: 0.8291473925

00:09:01.176 --> 00:09:04.113 that have emerged over the past year of

NOTE Confidence: 0.8291473925

00:09:04.113 --> 00:09:06.799 our using ChatGPT often on a daily basis.

NOTE Confidence: 0.8291473925

00:09:06.800 --> 00:09:09.460 So this first use case is when

NOTE Confidence: 0.8291473925

00:09:09.460 --> 00:09:11.080 reviewing multiple choice exams.

NOTE Confidence: 0.8291473925

00:09:11.080 --> 00:09:13.752 So this is an example of a multiple

NOTE Confidence: 0.8291473925

00:09:13.752 --> 00:09:15.796 choice question that we had on a

NOTE Confidence: 0.8291473925

00:09:15.796 --> 00:09:17.548 midterm and I missed the question,

NOTE Confidence: 0.8291473925

00:09:17.548 --> 00:09:20.217 I wasn't totally sure why and I couldn't

NOTE Confidence: 0.8291473925

00:09:20.217 --> 00:09:22.117 really explain the correct answer.

NOTE Confidence: 0.8291473925

00:09:22.120 --> 00:09:24.604 And unfortunately faculty have so much

NOTE Confidence: 0.8291473925

00:09:24.604 --> 00:09:27.506 on their play and sometimes you want

NOTE Confidence: 0.8291473925

00:09:27.506 --> 00:09:29.277 more of a rationale than is provided.

NOTE Confidence: 0.8291473925

00:09:29.280 --> 00:09:31.512 So this was plugging in that

NOTE Confidence: 0.8291473925

00:09:31.512 --> 00:09:33.360 whole question into Chat CPT.

NOTE Confidence: 0.8291473925

00:09:33.360 --> 00:09:36.900 We were able to explore its response to

NOTE Confidence: 0.8291473925

00:09:36.900 --> 00:09:39.280 try to better understand the question and

NOTE Confidence: 0.8291473925

00:09:39.349 --> 00:09:41.400 you also get this nice verification of

NOTE Confidence: 0.8291473925

00:09:41.400 --> 00:09:44.024 if Chat BT chooses the correct answer,

NOTE Confidence: 0.8291473925

00:09:44.024 --> 00:09:46.977 that's at least some protection against you

NOTE Confidence: 0.8291473925

00:09:46.977 --> 00:09:48.999 knowing its response is an hallucination.

NOTE Confidence: 0.911115917692308

00:09:51.080 --> 00:09:53.572 Another use case that Conrad and I

NOTE Confidence: 0.911115917692308

00:09:53.572 --> 00:09:55.879 have been discussing is practice cases.

NOTE Confidence: 0.911115917692308

00:09:55.880 --> 00:09:58.112 So we have workshops and preclinical

NOTE Confidence: 0.911115917692308

00:09:58.112 --> 00:10:00.137 where we go through practice

NOTE Confidence: 0.911115917692308

00:10:00.137 --> 00:10:01.997 cases with faculty member,

NOTE Confidence: 0.911115917692308

00:10:02.000 --> 00:10:04.082 but there's so many more important

NOTE Confidence: 0.911115917692308

00:10:04.082 --> 00:10:06.172 topics that we simply don't have

NOTE Confidence: 0.911115917692308

00:10:06.172 --> 00:10:08.080 time to cover in those spaces.

NOTE Confidence: 0.911115917692308

00:10:08.080 --> 00:10:12.000 And so we can input into ChatGPT

NOTE Confidence: 0.911115917692308

00:10:12.000 --> 00:10:14.030 and ask for workshop cases that we

NOTE Confidence: 0.911115917692308

00:10:14.030 --> 00:10:16.117 can then work through on our own.

NOTE Confidence: 0.911115917692308

00:10:16.120 --> 00:10:18.358 The advantage of doing this with

NOTE Confidence: 0.911115917692308

00:10:18.358 --> 00:10:20.938 ChatGPT over using a clinical cases

NOTE Confidence: 0.911115917692308

00:10:20.938 --> 00:10:23.518 textbook or what's available on like

NOTE Confidence: 0.911115917692308

00:10:23.518 --> 00:10:25.192 the New England Journal website is

NOTE Confidence: 0.911115917692308

00:10:25.192 --> 00:10:27.476 that we can actually interact with it.

NOTE Confidence: 0.911115917692308

00:10:27.480 --> 00:10:29.286 So we can ask it to rephrase

NOTE Confidence: 0.911115917692308

00:10:29.286 --> 00:10:31.080 things that don't make sense to us.

NOTE Confidence: 0.911115917692308

00:10:31.080 --> 00:10:33.996 We can ask for additional details.

NOTE Confidence: 0.911115917692308

00:10:34.000 --> 00:10:35.508 But perhaps most importantly,

NOTE Confidence: 0.911115917692308

00:10:35.508 --> 00:10:37.393 the cases that it's generating

NOTE Confidence: 0.911115917692308

00:10:37.393 --> 00:10:38.480 are not static.

NOTE Confidence: 0.911115917692308

00:10:38.480 --> 00:10:40.676 So we could ask it to change one finding.

NOTE Confidence: 0.911115917692308

00:10:40.680 --> 00:10:41.685 So for example,

NOTE Confidence: 0.911115917692308

00:10:41.685 --> 00:10:44.030 change a physical exam finding or a

NOTE Confidence: 0.911115917692308

00:10:44.099 --> 00:10:46.395 lab finding and then redo the case.

NOTE Confidence: 0.911115917692308

00:10:46.400 --> 00:10:49.620 And that really helps us hone our

NOTE Confidence: 0.911115917692308

00:10:49.620 --> 00:10:51.854 clinical reasoning skills to see

NOTE Confidence: 0.911115917692308

17

00:10:51.854 --> 00:10:54.416 how one element can change the

NOTE Confidence: 0.911115917692308

00:10:54.416 --> 00:10:55.880 whole differential or not.

NOTE Confidence: 0.911115917692308

00:10:55.880 --> 00:10:57.968 So it's allowing us to practice

NOTE Confidence: 0.911115917692308

00:10:57.968 --> 00:10:59.040 applying the pathophysiological

NOTE Confidence: 0.911115917692308

00:10:59.040 --> 00:11:00.840 frameworks that we are learning.

NOTE Confidence: 0.921419291666667

00:11:02.840 --> 00:11:04.184 We're saving a third use case

NOTE Confidence: 0.921419291666667

00:11:04.184 --> 00:11:06.000 for the end of our presentation,

NOTE Confidence: 0.921419291666667

00:11:06.000 --> 00:11:06.720 so we'll come back to it.

NOTE Confidence: 0.921419291666667

00:11:06.720 --> 00:11:09.296 But this is a more recent update

NOTE Confidence: 0.921419291666667

00:11:09.296 --> 00:11:11.960 from Open AI, the development of

NOTE Confidence: 0.921419291666667

00:11:11.960 --> 00:11:14.040 these personalized GPT models.

NOTE Confidence: 0.921419291666667

00:11:14.040 --> 00:11:15.180 And with these models,

NOTE Confidence: 0.921419291666667

00:11:15.180 --> 00:11:16.890 you can custom build a version

NOTE Confidence: 0.921419291666667

00:11:16.946 --> 00:11:19.202 of Chat PT by providing relevant

NOTE Confidence: 0.921419291666667

00:11:19.202 --> 00:11:19.954 contextual information.

NOTE Confidence: 0.921419291666667

00:11:19.960 --> 00:11:20.540 For example,

NOTE Confidence: 0.921419291666667

00:11:20.540 --> 00:11:22.280 I'm a second year medical student

NOTE Confidence: 0.921419291666667

00:11:22.280 --> 00:11:23.873 and I'm interested in learning

NOTE Confidence: 0.921419291666667

00:11:23.873 --> 00:11:26.092 content at the level of death needed

NOTE Confidence: 0.921419291666667

00:11:26.152 --> 00:11:28.400 for my upcoming USMLE STEP exam.

NOTE Confidence: 0.921419291666667

00:11:28.400 --> 00:11:31.280 Moreover, for my personal learning style,

NOTE Confidence: 0.921419291666667

00:11:31.280 --> 00:11:33.560 I like information presented concisely,

NOTE Confidence: 0.921419291666667

00:11:33.560 --> 00:11:35.300 using familiar medical abbreviations

NOTE Confidence: 0.921419291666667

00:11:35.300 --> 00:11:37.475 and bulleted lists when applicable.

NOTE Confidence: 0.91291524

00:11:38.600 --> 00:11:40.650 So Conrad is significantly better

NOTE Confidence: 0.91291524

00:11:40.650 --> 00:11:42.960 at memorizing patterns than I am,

NOTE Confidence: 0.91291524

00:11:42.960 --> 00:11:45.090 and I really need a framework

NOTE Confidence: 0.91291524

00:11:45.090 --> 00:11:47.195 for thinking that is Physiology

NOTE Confidence: 0.91291524

00:11:47.195 --> 00:11:49.900 driven so that I can work my way

NOTE Confidence: 0.91291524

00:11:49.900 --> 00:11:51.908 up from the basic principles.

NOTE Confidence: 0.91291524

00:11:51.908 --> 00:11:54.470 So when I was creating my

NOTE Confidence: 0.91291524

00:11:54.555 --> 00:11:56.279 Med school GPT tutor,

NOTE Confidence: 0.91291524

00:11:56.280 --> 00:11:58.877 I specifically told it that I wanted

NOTE Confidence: 0.91291524

00:11:58.877 --> 00:12:01.149 explanations to be longer centered

NOTE Confidence: 0.91291524

00:12:01.149 --> 00:12:03.333 on pathophysiological frameworks and

NOTE Confidence: 0.91291524

00:12:03.333 --> 00:12:06.069 building from the underlying mechanisms

NOTE Confidence: 0.91291524

00:12:06.069 --> 00:12:08.955 up through the presentation of disease.

NOTE Confidence: 0.91291524

00:12:08.960 --> 00:12:11.102 So this is really great because Conrad

NOTE Confidence: 0.91291524

00:12:11.102 --> 00:12:14.000 and I are using the same tool ChatGPT 4,

NOTE Confidence: 0.91291524

00:12:14.000 --> 00:12:16.151 but we are able to tailor it based to

NOTE Confidence: 0.91291524

00:12:16.151 --> 00:12:18.499 or based on what we specifically need

NOTE Confidence: 0.91291524

00:12:18.499 --> 00:12:20.879 for our own individual learning styles.

NOTE Confidence: 0.918543648148148

00:12:22.920 --> 00:12:24.635 So here are a few other things

NOTE Confidence: 0.918543648148148

00:12:24.635 --> 00:12:26.387 that Conrad and I have come up

NOTE Confidence: 0.918543648148148

00:12:26.387 --> 00:12:28.154 with and that are suggested in the

NOTE Confidence: 0.918543648148148

00:12:28.154 --> 00:12:29.798 literature as to ways that chat.

NOTE Confidence: 0.918543648148148

00:12:29.800 --> 00:12:32.796 GPT can be used in medical education,

NOTE Confidence: 0.918543648148148

00:12:32.800 --> 00:12:35.173 so it could be used to reduce

NOTE Confidence: 0.918543648148148

00:12:35.173 --> 00:12:36.693 the overwhelming landscape of

NOTE Confidence: 0.918543648148148

00:12:36.693 --> 00:12:38.437 available resources for students.

NOTE Confidence: 0.918543648148148

00:12:38.440 --> 00:12:40.596 It could help create a study plan,

NOTE Confidence: 0.918543648148148

00:12:40.600 --> 00:12:42.760 and it could also be a simulated patient.

NOTE Confidence: 0.918543648148148

00:12:42.760 --> 00:12:44.320 And we could practice doing a

NOTE Confidence: 0.918543648148148

00:12:44.320 --> 00:12:46.718 history taking, typing it out.

NOTE Confidence: 0.918543648148148

00:12:46.720 --> 00:12:47.920 So there's lots of potential

NOTE Confidence: 0.7728168325

00:12:49.640 --> 00:12:51.628 taking a step back from the day-to-day

NOTE Confidence: 0.7728168325

00:12:51.628 --> 00:12:53.359 trench of the medical school,

NOTE Confidence: 0.7728168325

00:12:53.360 --> 00:12:55.102 whether we like it or not, large

NOTE Confidence: 0.7728168325

00:12:55.102 --> 00:12:57.874 language models are coming to healthcare.

NOTE Confidence: 0.7728168325

00:12:57.880 --> 00:12:59.832 Here is a smattering of a few of

NOTE Confidence: 0.7728168325

00:12:59.832 --> 00:13:01.841 the recent papers coming out about

NOTE Confidence: 0.7728168325

00:13:01.841 --> 00:13:03.661 potential uses of Chat Chipetia

NOTE Confidence: 0.7728168325

00:13:03.661 --> 00:13:05.314 Medicine and since making these

NOTE Confidence: 0.7728168325

00:13:05.314 --> 00:13:07.156 slides there's been a lot more.

NOTE Confidence: 0.7728168325

00:13:07.160 --> 00:13:10.015 Moreover, Microsoft and Epic announced

NOTE Confidence: 0.7728168325

00:13:10.015 --> 00:13:13.160 and expanded Bring Chat BT into the

NOTE Confidence: 0.7728168325

00:13:13.160 --> 00:13:15.160 electronic health records at Yale.

NOTE Confidence: 0.7728168325

00:13:15.160 --> 00:13:16.360 Whether we like it or not,

NOTE Confidence: 0.7728168325

00:13:16.360 --> 00:13:19.392 we need to be prepared here.

NOTE Confidence: 0.7728168325

00:13:19.392 --> 00:13:21.264 I'll also highlight the in as

NOTE Confidence: 0.7728168325

00:13:21.264 --> 00:13:23.640 part of this expanded partnership,

NOTE Confidence: 0.7728168325

00:13:23.640 --> 00:13:25.635 there's actually a pilot program

NOTE Confidence: 0.7728168325

00:13:25.635 --> 00:13:28.161 that's happening at Y and HH Yell

NOTE Confidence: 0.7728168325

00:13:28.161 --> 00:13:30.580 is one of 10 sites selected for

NOTE Confidence: 0.7728168325

00:13:30.580 --> 00:13:33.580 this pilot program where we can

NOTE Confidence: 0.7728168325

00:13:33.580 --> 00:13:36.320 actually have for the Mychart

NOTE Confidence: 0.7728168325

00:13:36.320 --> 00:13:38.090 inbox messaging from physicians.

NOTE Confidence: 0.7728168325

00:13:38.090 --> 00:13:40.040 They'll there can be so free.

NOTE Confidence: 0.7728168325

00:13:40.040 --> 00:13:41.348 In the specific example,

NOTE Confidence: 0.7728168325

00:13:41.348 --> 00:13:43.688 this patient asked about the poor air

NOTE Confidence: 0.7728168325

00:13:43.688 --> 00:13:45.584 quality and whether it is impacting

NOTE Confidence: 0.7728168325

00:13:45.584 --> 00:13:47.199 or should impact her exercise

NOTE Confidence: 0.7728168325

00:13:47.199 --> 00:13:49.023 routine and whether she can keep

NOTE Confidence: 0.7728168325

00:13:49.023 --> 00:13:52.874 going on walks and chat to BT GB T4,

NOTE Confidence: 0.7728168325

00:13:52.880 --> 00:13:55.208 in this case drafts,

NOTE Confidence: 0.7728168325

00:13:55.208 --> 00:13:58.022 this auto reply that the physician

NOTE Confidence: 0.7728168325

00:13:58.022 --> 00:13:59.438 absolutely needs to read,

NOTE Confidence: 0.7728168325

00:13:59.440 --> 00:13:59.799 review,

NOTE Confidence: 0.7728168325

00:13:59.799 --> 00:14:02.312 likely edit before and of course you

NOTE Confidence: 0.7728168325

00:14:02.312 --> 00:14:04.996 have the option to reject that draft.

NOTE Confidence: 0.7728168325

00:14:05.000 --> 00:14:08.360 But this is coming to Epic very soon.

NOTE Confidence: 0.7728168325

00:14:08.360 --> 00:14:10.340 So I think that's part of the impetus for

NOTE Confidence: 0.7728168325

00:14:10.340 --> 00:14:12.360 us really learning about these models.

NOTE Confidence: 0.938213937

00:14:17.760 --> 00:14:20.752 So there are many proposed ways in the

NOTE Confidence: 0.938213937

00:14:20.752 --> 00:14:23.180 literature at large about how ChatGPT

NOTE Confidence: 0.938213937

00:14:23.180 --> 00:14:25.592 can be used in medical practice.

NOTE Confidence: 0.938213937

00:14:25.600 --> 00:14:28.584 So Conrad and I have talked about in

NOTE Confidence: 0.938213937

00:14:28.584 --> 00:14:31.132 particular that ChatGPT can be applied to

NOTE Confidence: 0.938213937

00:14:31.132 --> 00:14:33.479 reduce the administrative load of physicians.

NOTE Confidence: 0.938213937

00:14:33.480 --> 00:14:35.592 So for example, it could be

NOTE Confidence: 0.938213937

00:14:35.592 --> 00:14:37.670 used for insurance filings or

NOTE Confidence: 0.938213937

00:14:37.670 --> 00:14:39.479 generating discharge instructions.

NOTE Confidence: 0.938213937

00:14:39.480 --> 00:14:41.600 It can also be used for reducing errors.

NOTE Confidence: 0.938213937

00:14:41.600 --> 00:14:43.250 So for example,

NOTE Confidence: 0.938213937

00:14:43.250 --> 00:14:45.450 detecting potential drug drug

NOTE Confidence: 0.938213937

00:14:45.450 --> 00:14:47.365 interactions and it might actually be

NOTE Confidence: 0.938213937

00:14:47.365 --> 00:14:49.439 able to reduce the burden on patients.

NOTE Confidence: 0.938213937

00:14:49.440 --> 00:14:50.211 So for example,

NOTE Confidence: 0.938213937

00:14:50.211 --> 00:14:53.220 there may be a way to fall or do a

NOTE Confidence: 0.938213937

00:14:53.220 --> 00:14:55.808 follow up appointment with the chat bot

NOTE Confidence: 0.938213937

00:14:55.808 --> 00:14:57.668 without actually scheduling a whole

NOTE Confidence: 0.938213937

00:14:57.668 --> 00:15:00.440 visit for something that's very routine.

NOTE Confidence: 0.938213937

00:15:00.440 --> 00:15:01.212 But ultimately,

NOTE Confidence: 0.938213937

00:15:01.212 --> 00:15:03.528 the goal is to use automation

NOTE Confidence: 0.938213937

00:15:03.528 --> 00:15:05.293 to reduce physician burnout

NOTE Confidence: 0.938213937

00:15:05.293 --> 00:15:07.598 and to improve patient care.

NOTE Confidence: 0.892183298333333

00:15:09.720 --> 00:15:11.946 So as Conrad said, we really need

NOTE Confidence: 0.892183298333333

00:15:11.946 --> 00:15:14.318 to be prepared for this inevitable

NOTE Confidence: 0.892183298333333

00:15:14.318 --> 00:15:16.558 integration of AI into healthcare.

NOTE Confidence: 0.892183298333333

00:15:16.560 --> 00:15:19.304 And I think that part of that is

NOTE Confidence: 0.892183298333333

00:15:19.304 --> 00:15:21.974 evaluating very critically how we can

NOTE Confidence: 0.892183298333333

00:15:21.974 --> 00:15:24.359 use large language models responsibly,

NOTE Confidence: 0.892183298333333

00:15:24.360 --> 00:15:27.629 but also what the limits are of

NOTE Confidence: 0.892183298333333

00:15:27.629 --> 00:15:30.438 large language models in AI at large.

NOTE Confidence: 0.892183298333333

00:15:30.440 --> 00:15:32.798 So we think questions about hallucinations,

NOTE Confidence: 0.892183298333333

00:15:32.800 --> 00:15:35.509 bias chat, GP, TS evaluation of its

NOTE Confidence: 0.892183298333333

00:15:35.509 --> 00:15:37.861 own uncertainty and legal and ethical

NOTE Confidence: 0.892183298333333

00:15:37.861 --> 00:15:40.472 issues would be great to address in

NOTE Confidence: 0.892183298333333

00:15:40.544 --> 00:15:43.360 spaces like professional responsibility,

NOTE Confidence: 0.892183298333333

00:15:43.360 --> 00:15:45.166 which is a preclinical course that

NOTE Confidence: 0.892183298333333

00:15:45.166 --> 00:15:47.358 goes through some of the major ethical

NOTE Confidence: 0.892183298333333

00:15:47.360 --> 00:15:49.040 problems that physicians face.

NOTE Confidence: 0.9314532275

00:15:49.880 --> 00:15:51.326 And we'll add, they did indeed

NOTE Confidence: 0.9314532275

00:15:51.326 --> 00:15:53.170 have a session on this for the

NOTE Confidence: 0.9314532275

00:15:53.170 --> 00:15:54.648 first year students, which we are

NOTE Confidence: 0.9314532275

00:15:54.648 --> 00:15:56.160 really excited to see and we want,

NOTE Confidence: 0.9314532275

00:15:56.160 --> 00:15:57.672 we'd love to see more of those

NOTE Confidence: 0.9314532275

00:15:57.672 --> 00:15:58.800 kind of discussions happening.

NOTE Confidence: 0.939202921875

00:16:01.040 --> 00:16:03.856 So for this part, we're going to show

NOTE Confidence: 0.939202921875

00:16:03.856 --> 00:16:06.677 a short live demo of 1/3 use case.

NOTE Confidence: 0.939202921875

00:16:06.680 --> 00:16:09.600 So this is something that we use when

NOTE Confidence: 0.939202921875

00:16:09.600 --> 00:16:12.130 reviewing our like clinical cases so far

NOTE Confidence: 0.939202921875

00:16:12.130 --> 00:16:15.359 in this first year of didactic curriculum,

NOTE Confidence: 0.939202921875

00:16:15.360 --> 00:16:17.145 but also something that we might use

NOTE Confidence: 0.939202921875

00:16:17.145 --> 00:16:19.583 on the wards after seeing a patient

NOTE Confidence: 0.939202921875

00:16:19.583 --> 00:16:21.199 brainstorming our initial differential,

NOTE Confidence: 0.939202921875

00:16:21.200 --> 00:16:23.636 but then wanting to check back and

NOTE Confidence: 0.939202921875

00:16:23.640 --> 00:16:25.770 see if there's other differentials

NOTE Confidence: 0.939202921875

00:16:25.770 --> 00:16:27.474 that we're potentially missing,

NOTE Confidence: 0.939202921875

00:16:27.480 --> 00:16:29.160 things that we're that we should

NOTE Confidence: 0.939202921875

00:16:29.160 --> 00:16:30.280 should be considering here.

NOTE Confidence: 0.939202921875

00:16:30.280 --> 00:16:33.640 So hopefully this screen share works

NOTE Confidence: 0.939202921875

00:16:33.640 --> 00:16:39.280 and here I'll click submit and chat.

NOTE Confidence: 0.939202921875

00:16:39.280 --> 00:16:42.891 BT can help brainstorm this list and

NOTE Confidence: 0.939202921875

00:16:42.891 --> 00:16:45.488 it gives us initial list linking the

NOTE Confidence: 0.939202921875

00:16:45.488 --> 00:16:47.984 specific symptoms in the presentation to

NOTE Confidence: 0.939202921875

00:16:47.984 --> 00:16:50.516 different potential diagnosis on that list.

NOTE Confidence: 0.939202921875

00:16:50.520 --> 00:16:52.940 But I think the most useful thing here is the

NOTE Confidence: 0.939202921875

00:16:53.001 --> 00:16:55.318 additional follow up questions you can ask.

NOTE Confidence: 0.939202921875

00:16:55.320 --> 00:16:57.600 So I won't go through each one individually,

NOTE Confidence: 0.939202921875

00:16:57.600 --> 00:16:59.916 but things ranging from which physical

NOTE Confidence: 0.939202921875

00:16:59.916 --> 00:17:02.441 exam maneuvers might we want to

NOTE Confidence: 0.939202921875

00:17:02.441 --> 00:17:04.269 consider to further differentiate

NOTE Confidence: 0.939202921875

00:17:04.269 --> 00:17:05.640 between these diagnosis.

NOTE Confidence: 0.939202921875

00:17:05.640 --> 00:17:08.190 What laboratory should we order and

NOTE Confidence: 0.939202921875

00:17:08.190 --> 00:17:10.400 what might, what results might we

NOTE Confidence: 0.939202921875

00:17:10.400 --> 00:17:12.440 expect for each of these diagnosis,

NOTE Confidence: 0.939202921875

00:17:12.440 --> 00:17:13.560 what for their work up,

NOTE Confidence: 0.939202921875

00:17:13.560 --> 00:17:15.339 what treatments, etcetera.

NOTE Confidence: 0.939202921875

00:17:15.339 --> 00:17:17.118 And you know,

NOTE Confidence: 0.939202921875

00:17:17.120 --> 00:17:18.220 in addition to asking across

NOTE Confidence: 0.939202921875

00:17:18.220 --> 00:17:19.600 the board for all of them,

NOTE Confidence: 0.939202921875

00:17:19.600 --> 00:17:21.598 you can hone in and say

NOTE Confidence: 0.939202921875

00:17:21.598 --> 00:17:22.597 for PCOS specifically,

NOTE Confidence: 0.939202921875

00:17:22.600 --> 00:17:25.360 what do I need to be thinking about?

NOTE Confidence: 0.939202921875

00:17:25.360 --> 00:17:26.708 So that interactive component

NOTE Confidence: 0.939202921875

00:17:26.708 --> 00:17:28.393 is really helpful for us.

NOTE Confidence: 0.877625858235294

00:17:30.160 --> 00:17:31.948 Yeah, we joke that you're arguing

NOTE Confidence: 0.877625858235294

00:17:31.948 --> 00:17:33.465 with ChatGPT and that's actually

NOTE Confidence: 0.877625858235294

00:17:33.465 --> 00:17:35.079 the most useful part of it.

NOTE Confidence: 0.867193211666667

00:17:35.800 --> 00:17:37.312 And the last note is the

NOTE Confidence: 0.867193211666667

00:17:37.312 --> 00:17:38.879 same thing we if we have,

NOTE Confidence: 0.867193211666667

00:17:38.880 --> 00:17:40.070 if we're rotating together and

NOTE Confidence: 0.867193211666667

00:17:40.070 --> 00:17:41.605 we had a few minutes before

NOTE Confidence: 0.867193211666667

00:17:41.605 --> 00:17:42.797 talking to the attending,

NOTE Confidence: 0.867193211666667

00:17:42.800 --> 00:17:44.501 we definitely want to go back and

NOTE Confidence: 0.867193211666667

00:17:44.501 --> 00:17:45.848 forward talking about our differentials

NOTE Confidence: 0.867193211666667

00:17:45.848 --> 00:17:47.857 and seeing if there's things that and

NOTE Confidence: 0.867193211666667

00:17:47.857 --> 00:17:49.558 Elizabeth thought of that maybe I missed.

NOTE Confidence: 0.867193211666667

00:17:49.560 --> 00:17:50.984 So we kind of think of it as

NOTE Confidence: 0.867193211666667

00:17:50.984 --> 00:17:51.799 a conversation like that.

NOTE Confidence: 0.878394846666667

00:17:53.600 --> 00:17:56.260 So we know that AI and medicine

NOTE Confidence: 0.878394846666667

00:17:56.260 --> 00:17:58.520 sounds really scary and uncertain,

NOTE Confidence: 0.878394846666667

00:17:58.520 --> 00:17:59.980 and we have our own

NOTE Confidence: 0.878394846666667

00:17:59.980 --> 00:18:01.440 hesitations about it as well.

NOTE Confidence: 0.878394846666667

00:18:01.440 --> 00:18:03.939 But the reality really is that we

NOTE Confidence: 0.878394846666667

00:18:03.939 --> 00:18:06.096 don't actually have a choice because

NOTE Confidence: 0.878394846666667

00:18:06.096 --> 00:18:09.000 this is coming whether we like it or not.

NOTE Confidence: 0.878394846666667

00:18:09.000 --> 00:18:12.320 Conrad and I are starting in the hospital

NOTE Confidence: 0.878394846666667

00:18:12.320 --> 00:18:15.198 starting in January on our clerkships

NOTE Confidence: 0.878394846666667

00:18:15.200 --> 00:18:18.262 and as we mentioned there is ChatGPT

NOTE Confidence: 0.878394846666667

00:18:18.262 --> 00:18:22.278 being integrated into EPIC at Yale New Haven.

NOTE Confidence: 0.878394846666667

00:18:22.280 --> 00:18:24.310 And so that means literally from the

NOTE Confidence: 0.878394846666667

00:18:24.310 --> 00:18:26.424 beginning of our time in the clinical

NOTE Confidence: 0.878394846666667

00:18:26.424 --> 00:18:29.200 spaces ChatGPT will be present.

NOTE Confidence: 0.878394846666667

00:18:29.200 --> 00:18:31.456 So Yale School of Medicine's mission

NOTE Confidence: 0.878394846666667

00:18:31.456 --> 00:18:34.152 statement says that the school is striving

NOTE Confidence: 0.878394846666667

00:18:34.152 --> 00:18:36.612 to create leaders in medicine and science.

NOTE Confidence: 0.878394846666667

00:18:36.612 --> 00:18:38.610 And we really believe that in

NOTE Confidence: 0.878394846666667

00:18:38.672 --> 00:18:40.884 order to be equipped to be future

NOTE Confidence: 0.878394846666667

00:18:40.884 --> 00:18:42.672 leaders in medicine and science,

NOTE Confidence: 0.878394846666667

00:18:42.672 --> 00:18:45.112 we must be at the forefront of AI and

NOTE Confidence: 0.878394846666667

00:18:45.112 --> 00:18:47.356 medicine from the beginning of this movement.

NOTE Confidence: 0.878394846666667

00:18:47.360 --> 00:18:48.960 That really is quite inevitable.

NOTE Confidence: 0.9548566

00:18:51.960 --> 00:18:54.650 So we built in a little

NOTE Confidence: 0.9548566

00:18:54.650 --> 00:18:56.034 pause midway through this.

NOTE Confidence: 0.928027596666667

00:18:56.040 --> 00:18:58.280 We have about 3 to 5 minutes

NOTE Confidence: 0.928027596666667

00:18:58.280 --> 00:19:00.479 for one or two questions,

NOTE Confidence: 0.928027596666667

00:19:00.480 --> 00:19:01.312 if people have them.

NOTE Confidence: 0.928027596666667

00:19:01.312 --> 00:19:02.560 I haven't been watching the chat,

NOTE Confidence: 0.928027596666667

00:19:02.560 --> 00:19:04.436 so maybe we want to go there.

NOTE Confidence: 0.928027596666667

00:19:04.440 --> 00:19:05.820 The one I'll I'll let you

NOTE Confidence: 0.928027596666667

00:19:05.820 --> 00:19:07.320 decide how we open things up.

NOTE Confidence: 0.851276178333333

00:19:08.200 --> 00:19:09.838 No, let's open up to the

NOTE Confidence: 0.851276178333333

00:19:09.838 --> 00:19:11.639 group if they have any chats.

NOTE Confidence: 0.851276178333333

00:19:11.640 --> 00:19:13.392 If you want to unmute yourself

NOTE Confidence: 0.851276178333333

00:19:13.392 --> 00:19:14.560 and share your questions,

NOTE Confidence: 0.851276178333333

00:19:14.560 --> 00:19:18.160 we'd love to hear them. I

NOTE Confidence: 0.97112758

00:19:18.160 --> 00:19:21.480 had a question about accuracy again, I want

NOTE Confidence: 0.97112758

00:19:21.480 --> 00:19:27.120 you to review again how is the accuracy

NOTE Confidence: 0.945920997142857

00:19:27.120 --> 00:19:29.514 of the information that you are getting?

NOTE Confidence: 0.899541524545455

00:19:29.520 --> 00:19:31.320 Like if you use it as a mentor

NOTE Confidence: 0.899541524545455

00:19:31.320 --> 00:19:32.780 in the differential before

NOTE Confidence: 0.899541524545455

00:19:32.780 --> 00:19:34.960 you present to the attending.

NOTE Confidence: 0.899541524545455

00:19:34.960 --> 00:19:36.880 I mean we're so used to everything being

NOTE Confidence: 0.678970416666667

00:19:36.880 --> 00:19:38.638 peer reviewed and

NOTE Confidence: 0.734825352

00:19:38.640 --> 00:19:39.560 up to date or the

NOTE Confidence: 0.924798433333333

00:19:39.560 --> 00:19:41.680 other learning modules by

NOTE Confidence: 0.96910972

00:19:41.800 --> 00:19:43.240 another human being.

NOTE Confidence: 0.96910972

00:19:43.240 --> 00:19:46.680 So who is reviewing the chat review,

NOTE Confidence: 0.96910972

00:19:46.680 --> 00:19:48.272 especially if the Internet they're

NOTE Confidence: 0.96910972

00:19:48.272 --> 00:19:51.000 looking at is like you know,

NOTE Confidence: 0.96910972

00:19:51.000 --> 00:19:53.040 over a year old which is what you said

NOTE Confidence: 0.9681509625

00:19:53.040 --> 00:19:53.840 in the beginning. So

NOTE Confidence: 0.9571099675

00:19:53.840 --> 00:19:56.240 how is the accuracy being monitored?

NOTE Confidence: 0.923294127777778

00:19:59.640 --> 00:20:01.838 So I think that's a really good

NOTE Confidence: 0.923294127777778

00:20:01.838 --> 00:20:03.510 question and something we're always

NOTE Confidence: 0.923294127777778

00:20:03.510 --> 00:20:05.514 thinking about as we're using it.

NOTE Confidence: 0.923294127777778

00:20:05.520 --> 00:20:06.954 It was trained on the Internet

NOTE Confidence: 0.923294127777778

00:20:06.954 --> 00:20:08.360 and that's a scary thought.

NOTE Confidence: 0.923294127777778

00:20:08.360 --> 00:20:10.194 We all know we've all read things

NOTE Confidence: 0.923294127777778

00:20:10.194 --> 00:20:12.238 that are not true on the Internet.

NOTE Confidence: 0.923294127777778

00:20:12.240 --> 00:20:13.724 So that's definitely something

NOTE Confidence: 0.923294127777778

00:20:13.724 --> 00:20:15.950 we need to acknowledge and like

NOTE Confidence: 0.923294127777778

00:20:16.010 --> 00:20:17.982 understand when we're interpreting

NOTE Confidence: 0.923294127777778

00:20:17.982 --> 00:20:19.954 the responses from Chatchibiti.

NOTE Confidence: 0.923294127777778

00:20:19.960 --> 00:20:22.634 Never use Chatchibiti as a like a

NOTE Confidence: 0.923294127777778

00:20:22.634 --> 00:20:25.360 replacement of up to date for example.

NOTE Confidence: 0.923294127777778

00:20:25.360 --> 00:20:29.116 That being said, it is performing.

NOTE Confidence: 0.923294127777778

00:20:29.120 --> 00:20:31.220 I would say most of our classmates

NOTE Confidence: 0.923294127777778

00:20:31.220 --> 00:20:33.119 right now are not able to hit

NOTE Confidence: 0.923294127777778

00:20:33.120 --> 00:20:35.598 85% across all the STEP exams.

NOTE Confidence: 0.923294127777778

00:20:35.600 --> 00:20:38.526 I think that's one indicator of the

NOTE Confidence: 0.923294127777778

00:20:38.526 --> 00:20:40.520 pretty high accuracy that things

NOTE Confidence: 0.923294127777778

00:20:40.520 --> 00:20:42.680 are able to achieve right now.

NOTE Confidence: 0.923294127777778

00:20:42.680 --> 00:20:43.727 So it's not,

NOTE Confidence: 0.923294127777778

00:20:43.727 --> 00:20:45.821 it's imperfect and it's really important

NOTE Confidence: 0.923294127777778

00:20:45.821 --> 00:20:48.517 that people understand that it's imperfect.

NOTE Confidence: 0.923294127777778

00:20:48.520 --> 00:20:51.040 But I do think that it can be a

NOTE Confidence: 0.923294127777778

00:20:51.040 --> 00:20:52.960 really a really helpful classmate.

NOTE Confidence: 0.923294127777778

00:20:52.960 --> 00:20:55.876 I would even argue more helpful than myself.

NOTE Confidence: 0.923294127777778

00:20:55.876 --> 00:20:58.112 I know I'm not achieving those scores

NOTE Confidence: 0.923294127777778

00:20:58.112 --> 00:21:00.232 on any of the STEP exams right now.

NOTE Confidence: 0.923294127777778

00:21:00.240 --> 00:21:02.160 So I would I would recommend

NOTE Confidence: 0.923294127777778

00:21:02.160 --> 00:21:04.000 shooting questions to to ChatGPT

NOTE Confidence: 0.923294127777778

00:21:04.000 --> 00:21:06.080 maybe before a classmate asked me.

NOTE Confidence: 0.941876474444444

00:21:07.120 --> 00:21:09.731 And that's also why we recommend arguing

NOTE Confidence: 0.941876474444444

00:21:09.731 --> 00:21:12.412 with it and why we think it's important

NOTE Confidence: 0.941876474444444

00:21:12.412 --> 00:21:15.105 that we like start using it in our

NOTE Confidence: 0.941876474444444

00:21:15.105 --> 00:21:17.720 classrooms to then be able to learn,

NOTE Confidence: 0.941876474444444

00:21:17.720 --> 00:21:19.736 like how you can tell if

NOTE Confidence: 0.941876474444444

00:21:19.736 --> 00:21:21.080 it's hallucinating or not,

NOTE Confidence: 0.941876474444444

00:21:21.080 --> 00:21:23.362 or sort of learn how we can

NOTE Confidence: 0.941876474444444

00:21:23.362 --> 00:21:25.467 implement our own best practices

NOTE Confidence: 0.941876474444444

00:21:25.467 --> 00:21:28.824 and safeguards to ensure that we

NOTE Confidence: 0.941876474444444

00:21:28.824 --> 00:21:30.724 are like checking it appropriately.

NOTE Confidence: 0.941876474444444

00:21:30.724 --> 00:21:33.147 And I think that there isn't necessarily

NOTE Confidence: 0.941876474444444

00:21:33.147 --> 00:21:35.758 a best practice established at this point.

NOTE Confidence: 0.941876474444444

00:21:35.760 --> 00:21:37.746 And I think that's where Yale

NOTE Confidence: 0.941876474444444

00:21:37.746 --> 00:21:39.320 School of Medicine comes in.

NOTE Confidence: 0.941876474444444

00:21:39.320 --> 00:21:40.536 That's an opportunity for

NOTE Confidence: 0.941876474444444

00:21:40.536 --> 00:21:42.360 us to really lead the way,

NOTE Confidence: 0.903189965454545

00:21:44.080 --> 00:21:45.879 right. So we have time maybe for

NOTE Confidence: 0.903189965454545

00:21:45.879 --> 00:21:47.528 one more question live, but because

NOTE Confidence: 0.903189965454545

00:21:47.528 --> 00:21:49.516 there are so many of us presenting,

NOTE Confidence: 0.903189965454545

00:21:49.520 --> 00:21:50.940 we'll have everybody start replying

NOTE Confidence: 0.903189965454545

00:21:50.940 --> 00:21:53.238 in the chat as well once we're done.

NOTE Confidence: 0.903189965454545

00:21:53.240 --> 00:21:55.067 So Rob, I think you were the

NOTE Confidence: 0.903189965454545

00:21:55.067 --> 00:21:56.239 first question that I saw,

NOTE Confidence: 0.903189965454545

00:21:56.240 --> 00:21:57.680 if you wouldn't mind us sharing,

NOTE Confidence: 0.903189965454545

00:21:57.680 --> 00:21:58.160 I think, I

NOTE Confidence: 0.86829047

00:21:58.160 --> 00:21:59.840 think Dana actually went before me,

NOTE Confidence: 0.86829047

00:21:59.840 --> 00:22:01.359 but I I would just wanted to

NOTE Confidence: 0.837965085714286

00:22:01.360 --> 00:22:03.397 reply to Peggy, which is to point

NOTE Confidence: 0.837965085714286

00:22:03.400 --> 00:22:06.320 out that the idea that students

NOTE Confidence: 0.9443218175

00:22:06.320 --> 00:22:07.720 are using definitive textbooks

NOTE Confidence: 0.917840036666667

00:22:07.720 --> 00:22:09.040 only for all of their look

NOTE Confidence: 0.83496515

00:22:09.040 --> 00:22:11.340 UPS is not really what's

NOTE Confidence: 0.83496515

00:22:11.340 --> 00:22:12.520 happening, right. So people

NOTE Confidence: 0.961785764

00:22:12.520 --> 00:22:13.680 look up whatever they find,

NOTE Confidence: 0.943115146

00:22:14.080 --> 00:22:15.704 and the question is not, is it perfect,

NOTE Confidence: 0.943115146

00:22:15.704 --> 00:22:17.246 but is it better or at least

NOTE Confidence: 0.943115146

00:22:17.246 --> 00:22:18.676 as good as the alternatives?

NOTE Confidence: 0.943115146

00:22:18.680 --> 00:22:20.622 I mean, you know, I, as, you know,

NOTE Confidence: 0.943115146

00:22:20.622 --> 00:22:22.190 I teach a course and I sit

NOTE Confidence: 0.943115146

00:22:22.190 --> 00:22:23.620 through courses and I see people

NOTE Confidence: 0.943115146

00:22:23.620 --> 00:22:25.520 say things that aren't true.

NOTE Confidence: 0.943115146

00:22:25.520 --> 00:22:27.680 And so, you know, even at Yale,

NOTE Confidence: 0.943115146

00:22:27.680 --> 00:22:30.319 even with the fancy Yale professors,

NOTE Confidence: 0.943115146

00:22:30.320 --> 00:22:31.840 people say something that's wrong.

NOTE Confidence: 0.943115146

00:22:31.840 --> 00:22:33.740 I see things in textbooks that are wrong.

NOTE Confidence: 0.943115146

00:22:33.740 --> 00:22:35.876 So the idea that they're, you know,

NOTE Confidence: 0.943115146

00:22:35.880 --> 00:22:37.158 it's like the idea that somebody

NOTE Confidence: 0.943115146

00:22:37.158 --> 00:22:38.376 on the Internet might be wrong

NOTE Confidence: 0.943115146

00:22:38.376 --> 00:22:39.996 and we have to correct them.

NOTE Confidence: 0.943115146

00:22:39.996 --> 00:22:42.600 I think that's really not really not correct.

NOTE Confidence: 0.943115146

00:22:42.600 --> 00:22:45.616 I think the idea is what the really idea is.

NOTE Confidence: 0.943115146

00:22:45.616 --> 00:22:47.398 Is it better than the alternative?

NOTE Confidence: 0.943115146

00:22:47.400 --> 00:22:48.240 That's really the issue.

NOTE Confidence: 0.77621776875

00:22:50.680 --> 00:22:52.320 Dana, I think we can sneak you in.

NOTE Confidence: 0.77621776875

00:22:52.320 --> 00:22:53.238 What's your question?

NOTE Confidence: 0.876931197692308

00:22:54.760 --> 00:22:57.091 I was just going to add something

NOTE Confidence: 0.876931197692308

00:22:57.091 --> 00:22:59.159 that's probably not a novel thought,

NOTE Confidence: 0.876931197692308

00:22:59.160 --> 00:23:01.761 but that the input is only going to be

NOTE Confidence: 0.876931197692308

00:23:01.761 --> 00:23:04.742 as good as the clinical skills will allow

NOTE Confidence: 0.876931197692308

00:23:04.742 --> 00:23:07.840 insofar as did you ask the right question,

NOTE Confidence: 0.876931197692308

00:23:07.840 --> 00:23:10.360 you know what's missing from the STEM?

NOTE Confidence: 0.876931197692308

00:23:10.360 --> 00:23:12.558 Did you do the right physical exam?

NOTE Confidence: 0.876931197692308

00:23:12.560 --> 00:23:15.136 And it's just to say sometimes when new

NOTE Confidence: 0.876931197692308

00:23:15.136 --> 00:23:17.061 technology comes along like radio radiology,

NOTE Confidence: 0.876931197692308

00:23:17.061 --> 00:23:19.168 like CAT scans and new learners start

NOTE Confidence: 0.876931197692308

39

00:23:19.168 --> 00:23:21.478 to say the answer is in the CAT scan.

NOTE Confidence: 0.876931197692308

00:23:21.480 --> 00:23:22.680 And that's more sensitive and

NOTE Confidence: 0.876931197692308

00:23:22.680 --> 00:23:23.640 specific than anything else.

NOTE Confidence: 0.876931197692308

00:23:23.640 --> 00:23:25.636 So it's just an opportunity to remind

NOTE Confidence: 0.876931197692308

00:23:25.636 --> 00:23:27.800 people to use it as you are both saying,

NOTE Confidence: 0.876931197692308

00:23:27.800 --> 00:23:31.186 as a tool and that it can't be a

NOTE Confidence: 0.876931197692308

00:23:31.186 --> 00:23:33.238 substitute for clinical skills,

NOTE Confidence: 0.740569016666667

00:23:35.120 --> 00:23:36.695 right. We are gonna have

NOTE Confidence: 0.740569016666667

00:23:36.695 --> 00:23:37.955 some good discussion today.

NOTE Confidence: 0.740569016666667

00:23:37.960 --> 00:23:39.184 Conrad, do you have any last

NOTE Confidence: 0.740569016666667

00:23:39.184 --> 00:23:40.160 thoughts before I move on?

NOTE Confidence: 0.834513396

00:23:40.640 --> 00:23:43.104 One last insertion is just I also

NOTE Confidence: 0.834513396

00:23:43.104 --> 00:23:46.036 think there is value in practicing

NOTE Confidence: 0.834513396

00:23:46.036 --> 00:23:47.554 differentials without ChatGPT.

NOTE Confidence: 0.834513396

00:23:47.554 --> 00:23:49.752 I'm not saying that it should replace

NOTE Confidence: 0.834513396

00:23:49.752 --> 00:23:51.680 that like independent reasoning.

00:23:51.680 --> 00:23:53.800 And I think the parallel analogy is that,

00:23:53.800 --> 00:23:55.445 like, students need to learn

00:23:55.445 --> 00:23:56.432 their multiplication tables

00:23:56.432 --> 00:23:58.158 to be able to do algebra.

00:23:58.160 --> 00:24:00.050 And if they just use a calculator and never

00:24:00.050 --> 00:24:01.676 learn how to do multiplication tables,

00:24:01.680 --> 00:24:03.024 that's going to cause a lot of

00:24:03.024 --> 00:24:04.198 problems for them down the line.

00:24:04.200 --> 00:24:05.784 So I think it's really important

00:24:05.784 --> 00:24:07.240 to develop these skills, like,

00:24:07.240 --> 00:24:09.640 independently without these tools as well.

00:24:09.640 --> 00:24:11.683 I just think it's a no one would say

00:24:11.683 --> 00:24:13.838 no one should use calculators ever.

00:24:13.840 --> 00:24:15.366 It's just we have to be thoughtful

00:24:15.366 --> 00:24:17.426 about when we use them and and how

00:24:17.426 --> 00:24:18.514 they're augmenting our education.

NOTE Confidence: 0.904844556

00:24:20.240 --> 00:24:21.120 Awesome. Thank you so much.

NOTE Confidence: 0.904844556

00:24:21.120 --> 00:24:22.135 We're definitely going to have

NOTE Confidence: 0.904844556

00:24:22.135 --> 00:24:23.594 time at the end where we can

NOTE Confidence: 0.904844556

00:24:23.594 --> 00:24:24.599 fool some of these questions.

NOTE Confidence: 0.904844556

00:24:24.600 --> 00:24:27.040 But Conrad and Elizabeth David,

NOTE Confidence: 0.904844556

00:24:27.040 --> 00:24:28.496 if you want to start answering some

NOTE Confidence: 0.904844556

00:24:28.496 --> 00:24:30.080 of these other questions in the chat,

NOTE Confidence: 0.904844556

00:24:30.080 --> 00:24:31.364 that'd be great.

NOTE Confidence: 0.904844556

00:24:31.364 --> 00:24:33.932 So we've heard about some questions

NOTE Confidence: 0.904844556

00:24:33.932 --> 00:24:36.239 on student use of ChatGPT.

NOTE Confidence: 0.904844556

00:24:36.240 --> 00:24:39.000 But how can faculty use ChatGPT

NOTE Confidence: 0.904844556

00:24:39.000 --> 00:24:40.840 to augment medical education?

NOTE Confidence: 0.904844556

00:24:40.840 --> 00:24:43.176 And I say this as someone who doesn't

NOTE Confidence: 0.904844556

00:24:43.176 --> 00:24:45.038 consider themselves particularly tech savvy.

NOTE Confidence: 0.904844556

00:24:45.040 --> 00:24:47.000 I run a couple courses.

NOTE Confidence: 0.904844556

00:24:47.000 --> 00:24:49.079 But to be honest, more than anything,

NOTE Confidence: 0.904844556

00:24:49.080 --> 00:24:51.131 I'm a millennial who has significant fear

NOTE Confidence: 0.904844556

00:24:51.131 --> 00:24:53.320 of missing out more than anything else.

NOTE Confidence: 0.904844556

00:24:53.320 --> 00:24:55.276 And so I follow my journals,

NOTE Confidence: 0.904844556

00:24:55.280 --> 00:24:57.268 we all get our our updates right

NOTE Confidence: 0.904844556

00:24:57.268 --> 00:24:58.120 in our e-mail.

NOTE Confidence: 0.904844556

00:24:58.120 --> 00:25:01.600 And I'm seeing in academic medicine,

NOTE Confidence: 0.904844556

00:25:01.600 --> 00:25:02.575 JGME, medical teacher,

NOTE Confidence: 0.904844556

00:25:02.575 --> 00:25:05.200 more articles about how we can use this,

NOTE Confidence: 0.904844556

00:25:05.200 --> 00:25:06.552 even published medical education

NOTE Confidence: 0.904844556

00:25:06.552 --> 00:25:08.580 articles in JAMA and the New

NOTE Confidence: 0.904844556

00:25:08.644 --> 00:25:10.200 England Journal of Medicine,

NOTE Confidence: 0.904844556

00:25:10.200 --> 00:25:12.432 which as all of Y'all scholars

NOTE Confidence: 0.904844556

00:25:12.432 --> 00:25:14.400 know is very challenging to do.

NOTE Confidence: 0.904844556

00:25:14.400 --> 00:25:16.720 So clearly it is becoming

NOTE Confidence: 0.904844556

00:25:16.720 --> 00:25:19.040 mainstream not just in healthcare

NOTE Confidence: 0.904844556

00:25:19.123 --> 00:25:21.798 but specific to medical education.

NOTE Confidence: 0.904844556

00:25:21.800 --> 00:25:23.312 So with that in mind and we're

NOTE Confidence: 0.904844556

00:25:23.312 --> 00:25:25.000 starting to get a feeling about this,

NOTE Confidence: 0.904844556

00:25:25.000 --> 00:25:27.238 I wanted to see just that,

NOTE Confidence: 0.904844556

00:25:27.240 --> 00:25:29.808 how are you as faculty and

NOTE Confidence: 0.904844556

00:25:29.808 --> 00:25:31.920 learners feeling about chat GBD.

NOTE Confidence: 0.904844556

00:25:31.920 --> 00:25:34.034 So we're putting up a poll there.

NOTE Confidence: 0.904844556

00:25:34.040 --> 00:25:35.222 You can put as many choices

NOTE Confidence: 0.904844556

00:25:35.222 --> 00:25:36.399 as I want and I know,

NOTE Confidence: 0.904844556

00:25:36.400 --> 00:25:37.640 I know there are multiple

NOTE Confidence: 0.904844556

00:25:37.640 --> 00:25:38.632 choices in there too.

NOTE Confidence: 0.904844556

00:25:38.640 --> 00:25:40.038 I'll answer this after as well,

NOTE Confidence: 0.904844556

00:25:40.040 --> 00:25:41.839 but I'll say at least for me,

NOTE Confidence: 0.904844556

00:25:41.840 --> 00:25:45.280 for the past 6 three to six months,

NOTE Confidence: 0.904844556

00:25:45.280 --> 00:25:47.716 I've been talking to educators at Yale,

44

NOTE Confidence: 0.904844556

00:25:47.720 --> 00:25:48.606 Basic science,

NOTE Confidence: 0.904844556

00:25:48.606 --> 00:25:49.492 clinical science,

NOTE Confidence: 0.904844556

00:25:49.492 --> 00:25:51.707 and leaders across the country

NOTE Confidence: 0.904844556

00:25:51.707 --> 00:25:52.720 around ChatGPT.

NOTE Confidence: 0.904844556

00:25:52.720 --> 00:25:55.100 And these are some of the adjectives

NOTE Confidence: 0.904844556

00:25:55.100 --> 00:25:57.391 that I'm seeing and I know they've

NOTE Confidence: 0.904844556

00:25:57.391 --> 00:25:59.720 all crossed my mind to some degree.

NOTE Confidence: 0.904844556

00:25:59.720 --> 00:26:00.756 So I want to think about why

NOTE Confidence: 0.904844556

00:26:00.756 --> 00:26:01.520 we're having these concerns,

NOTE Confidence: 0.904844556

00:26:01.520 --> 00:26:03.440 some that have already been named.

NOTE Confidence: 0.904844556

00:26:03.440 --> 00:26:05.232 So the first one is the quality

NOTE Confidence: 0.904844556

00:26:05.232 --> 00:26:06.000 of the information.

NOTE Confidence: 0.904844556

00:26:06.000 --> 00:26:08.044 This is by far the biggest concern

NOTE Confidence: 0.904844556

00:26:08.044 --> 00:26:09.879 that's come up with educators.

NOTE Confidence: 0.904844556

00:26:09.880 --> 00:26:11.968 And I would certainly agree with Rob that

NOTE Confidence: 0.904844556

00:26:11.968 --> 00:26:14.159 while it's something to be concerned about,

NOTE Confidence: 0.904844556

00:26:14.160 --> 00:26:16.416 I think we have to remember like teaching

NOTE Confidence: 0.904844556

00:26:16.416 --> 00:26:18.717 comes from different sources all the time.

NOTE Confidence: 0.904844556

00:26:18.720 --> 00:26:20.610 We ask our learners to often study

NOTE Confidence: 0.904844556

00:26:20.610 --> 00:26:22.464 in groups together and where this

NOTE Confidence: 0.904844556

00:26:22.464 --> 00:26:24.119 where's that information coming from?

NOTE Confidence: 0.904844556

00:26:24.120 --> 00:26:26.710 I think another barrier that comes up

NOTE Confidence: 0.904844556

00:26:26.710 --> 00:26:29.040 is familiarity or comfort with use,

NOTE Confidence: 0.904844556

00:26:29.040 --> 00:26:31.260 where we hear things like large

NOTE Confidence: 0.904844556

00:26:31.260 --> 00:26:32.922 language models, predictive texts,

NOTE Confidence: 0.904844556

00:26:32.922 --> 00:26:33.383 chats,

NOTE Confidence: 0.904844556

00:26:33.383 --> 00:26:33.844 prompts,

NOTE Confidence: 0.904844556

00:26:33.844 --> 00:26:36.610 and it feels almost like we're

NOTE Confidence: 0.904844556

00:26:36.687 --> 00:26:38.920 coding and that's not what ChatGPT is.

NOTE Confidence: 0.904844556

00:26:38.920 --> 00:26:41.104 But I can understand where that

NOTE Confidence: 0.904844556

00:26:41.104 --> 00:26:42.196 concern comes from.

NOTE Confidence: 0.904844556

00:26:42.200 --> 00:26:43.955 And I think a very real one is cost.

NOTE Confidence: 0.904844556

00:26:43.960 --> 00:26:45.640 There's a literal cost of a monthly

NOTE Confidence: 0.904844556

00:26:45.640 --> 00:26:47.719 fee if you wanted to get Chachi BT4.

NOTE Confidence: 0.904844556

00:26:47.720 --> 00:26:49.400 But I think that more than that,

NOTE Confidence: 0.904844556

00:26:49.400 --> 00:26:51.284 it's the time investment kind of

NOTE Confidence: 0.904844556

00:26:51.284 --> 00:26:53.344 to the second point of how long

NOTE Confidence: 0.904844556

00:26:53.344 --> 00:26:55.073 is it going to take to learn.

NOTE Confidence: 0.904844556

00:26:55.080 --> 00:26:57.789 I think we're getting a lot of

NOTE Confidence: 0.904844556

00:26:57.789 --> 00:26:59.980 the similar concerns as when the

NOTE Confidence: 0.904844556

00:26:59.980 --> 00:27:02.590 EHR first came up in my training.

NOTE Confidence: 0.904844556

00:27:02.590 --> 00:27:04.840 So with that in mind,

NOTE Confidence: 0.960789346666667

00:27:04.840 --> 00:27:08.424 I wanted to also ask about how

NOTE Confidence: 0.960789346666667

00:27:08.424 --> 00:27:10.440 often you're using ChatGPT.

NOTE Confidence: 0.960789346666667

00:27:10.440 --> 00:27:11.936 But before that, David,

NOTE Confidence: 0.960789346666667

00:27:11.936 --> 00:27:14.180 I was wondering if you could

NOTE Confidence: 0.960789346666667

00:27:14.261 --> 00:27:16.295 show us about our our feelings

NOTE Confidence: 0.960789346666667

00:27:16.295 --> 00:27:18.440 on ChatGPT right now. So good.

NOTE Confidence: 0.960789346666667

00:27:18.440 --> 00:27:20.114 We have a lot of people who are curious.

NOTE Confidence: 0.960789346666667

00:27:20.120 --> 00:27:21.160 That's probably why you're here.

NOTE Confidence: 0.960789346666667

00:27:21.160 --> 00:27:22.087 That makes sense.

NOTE Confidence: 0.960789346666667

00:27:22.087 --> 00:27:24.680 But I'm kind of surprised we have a lot,

NOTE Confidence: 0.960789346666667

00:27:24.680 --> 00:27:27.158 a lot more optimism in the room.

NOTE Confidence: 0.960789346666667

00:27:27.160 --> 00:27:28.396 So we can build on that.

NOTE Confidence: 0.960789346666667

00:27:28.400 --> 00:27:29.172 That's right.

NOTE Confidence: 0.960789346666667

00:27:29.172 --> 00:27:30.716 We're already winning here,

NOTE Confidence: 0.960789346666667

00:27:30.720 --> 00:27:32.360 Conrad and Elizabeth and David.

NOTE Confidence: 0.960789346666667

00:27:32.360 --> 00:27:34.922 So next poll that's coming up

NOTE Confidence: 0.960789346666667

00:27:34.922 --> 00:27:37.794 is how often do you use ChatGPT.

NOTE Confidence: 0.960789346666667

00:27:37.794 --> 00:27:38.582 So David,

NOTE Confidence: 0.960789346666667

00:27:38.582 --> 00:27:41.340 we wouldn't mind closing this poll and

NOTE Confidence: 0.960789346666667

00:27:41.410 --> 00:27:43.960 opening up the next one about frequency.

00:27:43.960 --> 00:27:45.880 So are you never,

00:27:45.880 --> 00:27:47.638 have you never ever used it?

00:27:47.640 --> 00:27:49.936 Are you using it daily or have

00:27:49.936 --> 00:27:52.090 you tried it once and that

00:27:52.090 --> 00:27:54.274 was more than enough for you.

00:27:54.280 --> 00:27:55.360 And as we think about how

00:27:55.360 --> 00:27:56.240 often people are using it,

00:27:56.240 --> 00:27:57.850 I think it's important to think about

00:27:57.850 --> 00:27:59.324 change in the greater perspective

00:27:59.324 --> 00:28:00.796 of innovation and technology.

00:28:00.800 --> 00:28:03.747 So Everett Rodgers had some work in

00:28:03.747 --> 00:28:07.360 the 1960s around the diffusion of innovation,

00:28:07.360 --> 00:28:09.677 also known as the technology adoption cycle.

00:28:09.680 --> 00:28:11.941 For those of you who are Malcolm

00:28:11.941 --> 00:28:13.288 Gladwell enthusiasts and have

00:28:13.288 --> 00:28:14.556 read The Tipping Point,

NOTE Confidence: 0.960789346666667

00:28:14.560 --> 00:28:17.038 generally we think around getting to

NOTE Confidence: 0.960789346666667

00:28:17.038 --> 00:28:19.840 this 16 to 18% of any population.

NOTE Confidence: 0.960789346666667

00:28:19.840 --> 00:28:21.400 And after that point,

NOTE Confidence: 0.960789346666667

00:28:21.400 --> 00:28:23.542 you're starting to move more and

NOTE Confidence: 0.960789346666667

00:28:23.542 --> 00:28:24.970 more towards something that's

NOTE Confidence: 0.960789346666667

00:28:25.030 --> 00:28:26.238 just going to happen,

NOTE Confidence: 0.960789346666667

00:28:26.240 --> 00:28:27.383 something that's inevitable.

NOTE Confidence: 0.960789346666667

00:28:27.383 --> 00:28:30.050 And so I wanted to get David's

NOTE Confidence: 0.960789346666667

00:28:30.120 --> 00:28:32.094 take as probably the one with

NOTE Confidence: 0.960789346666667

00:28:32.094 --> 00:28:34.000 the most expertise on ChatGPT.

NOTE Confidence: 0.960789346666667

00:28:34.000 --> 00:28:35.280 David, how do you feel?

NOTE Confidence: 0.960789346666667

00:28:35.280 --> 00:28:37.520 Where do we feel like we are on

NOTE Confidence: 0.960789346666667

00:28:37.520 --> 00:28:39.560 ChatGPT in general academic use?

NOTE Confidence: 0.960789346666667

00:28:39.560 --> 00:28:42.116 And then specific to medical education,

NOTE Confidence: 0.960789346666667

00:28:42.120 --> 00:28:45.078 how many people are using it.

NOTE Confidence: 0.960789346666667

00:28:45.080 --> 00:28:45.280 So

NOTE Confidence: 0.883106994285714

00:28:45.280 --> 00:28:47.709 I think this is, this is partially

NOTE Confidence: 0.883106994285714

00:28:47.709 --> 00:28:49.839 a question of how we see it.

NOTE Confidence: 0.883106994285714

00:28:49.840 --> 00:28:51.471 You know, there's a lot of people

NOTE Confidence: 0.883106994285714

00:28:51.471 --> 00:28:52.998 who are certainly talking about it.

NOTE Confidence: 0.883106994285714

00:28:53.000 --> 00:28:54.520 There's a lot of conversations,

NOTE Confidence: 0.883106994285714

00:28:54.520 --> 00:28:56.760 there's a lot of hype,

NOTE Confidence: 0.883106994285714

00:28:56.760 --> 00:28:58.870 but and certainly students are

NOTE Confidence: 0.883106994285714

00:28:58.870 --> 00:29:00.788 using it quite more frequently

NOTE Confidence: 0.883106994285714

00:29:00.788 --> 00:29:03.280 than I ever expected them to be.

NOTE Confidence: 0.883106994285714

00:29:03.280 --> 00:29:05.488 But it hasn't quite hit that

NOTE Confidence: 0.883106994285714

00:29:05.488 --> 00:29:06.592 public consciousness moment.

NOTE Confidence: 0.883106994285714

00:29:06.600 --> 00:29:07.878 So I would estimate, you know,

NOTE Confidence: 0.883106994285714

00:29:07.880 --> 00:29:10.472 we're somewhere across the

NOTE Confidence: 0.883106994285714

00:29:10.472 --> 00:29:13.695 chasm in the early majority and

NOTE Confidence: 0.883106994285714

00:29:13.695 --> 00:29:15.755 specifically in medical education,

NOTE Confidence: 0.883106994285714

00:29:15.760 --> 00:29:17.680 I think there's been a lot of hesitancy,

NOTE Confidence: 0.883106994285714

00:29:17.680 --> 00:29:20.515 There's been a lot of questions about,

NOTE Confidence: 0.883106994285714

00:29:20.520 --> 00:29:21.242 you know,

NOTE Confidence: 0.883106994285714

00:29:21.242 --> 00:29:23.769 rightly as we've even seen today about

NOTE Confidence: 0.883106994285714

00:29:23.769 --> 00:29:26.158 validity and the the larger problems of,

NOTE Confidence: 0.883106994285714

00:29:26.160 --> 00:29:27.040 you know,

NOTE Confidence: 0.883106994285714

00:29:27.040 --> 00:29:28.800 accuracy of medical information

NOTE Confidence: 0.883106994285714

00:29:28.800 --> 00:29:30.120 amidst the Internet.

NOTE Confidence: 0.883106994285714

00:29:30.120 --> 00:29:32.759 But there's been some focus efforts to,

NOTE Confidence: 0.883106994285714

00:29:32.760 --> 00:29:33.756 to use it well.

NOTE Confidence: 0.883106994285714

00:29:33.756 --> 00:29:36.079 And this is really what we're talking about,

NOTE Confidence: 0.883106994285714

00:29:36.080 --> 00:29:37.248 right, Using it well.

NOTE Confidence: 0.883106994285714

00:29:37.248 --> 00:29:39.919 And that's going to be the tipping point.

NOTE Confidence: 0.883106994285714

00:29:39.920 --> 00:29:42.640 Once that has hit mainstream,

NOTE Confidence: 0.883106994285714

00:29:42.640 --> 00:29:44.146 once we're all talking about it

NOTE Confidence: 0.883106994285714

00:29:44.146 --> 00:29:45.680 or using it more commonly,

NOTE Confidence: 0.883106994285714

00:29:45.680 --> 00:29:48.340 that's when we'll tip to the late

NOTE Confidence: 0.883106994285714

00:29:48.340 --> 00:29:50.679 majority from the early majority.

NOTE Confidence: 0.883106994285714

00:29:50.680 --> 00:29:52.493 And I think we're really just just

NOTE Confidence: 0.883106994285714

00:29:52.493 --> 00:29:53.800 breaching the chasm right now.

NOTE Confidence: 0.592673262

00:29:54.400 --> 00:29:56.210 All right. So David, what, how often,

NOTE Confidence: 0.592673262

00:29:56.210 --> 00:29:57.560 where are we in the chasm,

NOTE Confidence: 0.592673262

00:29:57.560 --> 00:29:59.513 at least as far as our audience right now?

NOTE Confidence: 0.592673262

00:29:59.520 --> 00:30:02.680 So how's that poll looking?

NOTE Confidence: 0.592673262

00:30:02.680 --> 00:30:03.464 I love harkening back

NOTE Confidence: 0.592673262

00:30:03.464 --> 00:30:04.640 to a time of zoom polls.

NOTE Confidence: 0.592673262

00:30:04.640 --> 00:30:06.068 I haven't done one of these

NOTE Confidence: 0.592673262

00:30:06.068 --> 00:30:07.984 in a in a minute I would say.

NOTE Confidence: 0.592673262

00:30:07.984 --> 00:30:09.480 So we have a lot of never users,

NOTE Confidence: 0.592673262

00:30:09.480 --> 00:30:11.440 maybe a little bit, even some daily users.

NOTE Confidence: 0.592673262

00:30:11.440 --> 00:30:12.372 I'd say.

NOTE Confidence: 0.592673262

00:30:12.372 --> 00:30:16.480 I probably personally am a weekly user of it,

NOTE Confidence: 0.592673262

00:30:16.480 --> 00:30:19.328 probably every time I write up or start

NOTE Confidence: 0.592673262

00:30:19.328 --> 00:30:22.320 doing some sort of curriculum development.

NOTE Confidence: 0.592673262

00:30:22.320 --> 00:30:25.716 But I will say that honestly,

NOTE Confidence: 0.592673262

00:30:25.720 --> 00:30:28.317 if you're using it my my gestalt.

NOTE Confidence: 0.592673262

00:30:28.320 --> 00:30:29.783 If you're if you use it within

NOTE Confidence: 0.592673262

00:30:29.783 --> 00:30:31.392 the next like three to six months

NOTE Confidence: 0.592673262

00:30:31.392 --> 00:30:32.552 to some degree at least,

NOTE Confidence: 0.592673262

00:30:32.560 --> 00:30:33.636 like a few times,

NOTE Confidence: 0.592673262

00:30:33.636 --> 00:30:35.583 you probably would be in the early

NOTE Confidence: 0.592673262

00:30:35.583 --> 00:30:37.860 adopters is my read of the room from

NOTE Confidence: 0.592673262

00:30:37.860 --> 00:30:39.760 medical schools across the country.

NOTE Confidence: 0.592673262

00:30:39.760 --> 00:30:43.056 So how should educators use ChatGPT now?

NOTE Confidence: 0.592673262

00:30:43.056 --> 00:30:46.464 This review was published in the

NOTE Confidence: 0.592673262

00:30:46.464 --> 00:30:49.428 spring of 2023 in Academic Medicine

NOTE Confidence: 0.592673262

00:30:49.428 --> 00:30:51.256 on how artificial intelligence

NOTE Confidence: 0.592673262

00:30:51.256 --> 00:30:53.435 large language models like ChatGPT

NOTE Confidence: 0.592673262

00:30:53.435 --> 00:30:55.835 should be used in medical education.

NOTE Confidence: 0.592673262

00:30:55.840 --> 00:30:57.520 They came up with some competencies,

NOTE Confidence: 0.592673262

00:30:57.520 --> 00:30:59.760 knowledge of AI, ethical implications.

NOTE Confidence: 0.592673262

00:30:59.760 --> 00:31:01.356 Think about the bias, for example,

NOTE Confidence: 0.592673262

00:31:01.360 --> 00:31:02.515 of data sets.

NOTE Confidence: 0.592673262

00:31:02.515 --> 00:31:04.440 It can actually propagate bias

NOTE Confidence: 0.592673262

00:31:04.440 --> 00:31:06.268 if not reviewed correctly,

NOTE Confidence: 0.592673262

00:31:06.268 --> 00:31:08.553 how it's affecting clinical encounters

NOTE Confidence: 0.592673262

00:31:08.553 --> 00:31:11.197 and how we're working to improve it.

NOTE Confidence: 0.592673262

00:31:11.200 --> 00:31:12.460 But I think it's important

NOTE Confidence: 0.592673262

00:31:12.460 --> 00:31:13.720 to remember a couple things.

NOTE Confidence: 0.592673262

00:31:13.720 --> 00:31:16.975 One is that this isn't what every

NOTE Confidence: 0.592673262

00:31:16.975 --> 00:31:19.440 single medical educator needs to do.

NOTE Confidence: 0.592673262

55

00:31:19.440 --> 00:31:21.484 These are institutional values

NOTE Confidence: 0.592673262

00:31:21.484 --> 00:31:24.039 that we're trying to promote.

NOTE Confidence: 0.592673262

00:31:24.040 --> 00:31:25.720 2 With that in mind,

NOTE Confidence: 0.592673262

00:31:25.720 --> 00:31:27.985 we have our whole informatics

NOTE Confidence: 0.592673262

00:31:27.985 --> 00:31:29.797 department here at Yale,

NOTE Confidence: 0.592673262

00:31:29.800 --> 00:31:30.342 for example,

NOTE Confidence: 0.592673262

00:31:30.342 --> 00:31:32.510 that David is a part of who are

NOTE Confidence: 0.592673262

00:31:32.572 --> 00:31:34.636 helping and are going to develop

NOTE Confidence: 0.592673262

00:31:34.636 --> 00:31:36.458 more and more curricula and

NOTE Confidence: 0.592673262

00:31:36.458 --> 00:31:38.333 workshops for students and faculty

NOTE Confidence: 0.592673262

00:31:38.333 --> 00:31:40.206 alike to develop those skills.

NOTE Confidence: 0.592673262

00:31:40.206 --> 00:31:42.768 So I think honestly it might be

NOTE Confidence: 0.592673262

00:31:42.768 --> 00:31:44.497 better just to play around with

NOTE Confidence: 0.592673262

00:31:44.497 --> 00:31:46.310 it ourselves and see how it might

NOTE Confidence: 0.592673262

00:31:46.367 --> 00:31:48.077 be beneficial to us as educators.

NOTE Confidence: 0.592673262

00:31:48.080 --> 00:31:49.280 So I'll tell you my story.

NOTE Confidence: 0.592673262

00:31:49.280 --> 00:31:51.328 It's nothing particularly special,

NOTE Confidence: 0.592673262

00:31:51.328 --> 00:31:53.380 but when I first started using

NOTE Confidence: 0.592673262

00:31:53.380 --> 00:31:54.920 ChatGPT was over the summer.

NOTE Confidence: 0.592673262

00:31:54.920 --> 00:31:57.320 I direct our academic support

NOTE Confidence: 0.592673262

00:31:57.320 --> 00:31:59.726 program and I had to develop some

NOTE Confidence: 0.592673262

00:31:59.726 --> 00:32:01.640 cases for SP standardized patients,

NOTE Confidence: 0.592673262

00:32:01.640 --> 00:32:03.474 for our students who we work with.

NOTE Confidence: 0.592673262

00:32:03.480 --> 00:32:05.480 And I saw Barbara Hildebrandt on the call.

NOTE Confidence: 0.592673262

00:32:05.480 --> 00:32:07.520 She gave me a few reminders and it

NOTE Confidence: 0.592673262

00:32:07.520 --> 00:32:09.242 wasn't until the day before that

NOTE Confidence: 0.592673262

00:32:09.242 --> 00:32:10.970 I started writing these cases and

NOTE Confidence: 0.592673262

00:32:11.025 --> 00:32:12.761 I blocked out a few hours and I

NOTE Confidence: 0.592673262

00:32:12.761 --> 00:32:13.510 was like alright,

NOTE Confidence: 0.592673262

00:32:13.510 --> 00:32:15.990 I can write them myself or I could

NOTE Confidence: 0.592673262

00:32:15.990 --> 00:32:18.156 see what ChatGPT can do for me.

NOTE Confidence: 0.592673262

00:32:18.160 --> 00:32:19.960 So, not feeling great initially,

NOTE Confidence: 0.592673262

00:32:19.960 --> 00:32:23.355 but I saw what ChatGPT can do.

NOTE Confidence: 0.592673262

00:32:23.360 --> 00:32:26.223 I put in a general prompt below

NOTE Confidence: 0.592673262

00:32:26.223 --> 00:32:28.548 this and don't worry, Medicine,

NOTE Confidence: 0.592673262

00:32:28.548 --> 00:32:29.952 school, medicine, curricula,

NOTE Confidence: 0.592673262

00:32:29.952 --> 00:32:31.356 clinical skills program.

NOTE Confidence: 0.592673262

00:32:31.360 --> 00:32:34.033 I didn't show the actual case or I won't,

NOTE Confidence: 0.592673262

00:32:34.040 --> 00:32:37.360 but I I put in the one of our cases,

NOTE Confidence: 0.592673262

00:32:37.360 --> 00:32:39.320 one of our representative cases.

NOTE Confidence: 0.592673262

00:32:39.320 --> 00:32:41.154 Use this new prompt and chief concern

NOTE Confidence: 0.592673262

00:32:41.154 --> 00:32:43.437 and this is what it spit out to me now.

NOTE Confidence: 0.592673262

00:32:43.440 --> 00:32:47.360 This is a script for a standardized patient

NOTE Confidence: 0.9510886

00:32:47.360 --> 00:32:49.144 and it's written very,

NOTE Confidence: 0.9510886

00:32:49.144 --> 00:32:51.560 very similarly, but on a new case.

NOTE Confidence: 0.9510886

00:32:51.560 --> 00:32:53.877 So this is talking about knee pain.

NOTE Confidence: 0.9510886

00:32:53.880 --> 00:32:55.280 It gives us an HPI,

NOTE Confidence: 0.9510886

00:32:55.280 --> 00:32:57.120 but also things like emotional

NOTE Confidence: 0.9510886

00:32:57.120 --> 00:32:58.960 context as well social history.

NOTE Confidence: 0.9510886

00:32:58.960 --> 00:33:00.856 This is more than enough for

NOTE Confidence: 0.9510886

00:33:00.856 --> 00:33:03.358 an SP to use to play a role.

NOTE Confidence: 0.9510886

00:33:03.360 --> 00:33:04.830 It even gives us a little bit

NOTE Confidence: 0.9510886

00:33:04.830 --> 00:33:05.960 of a differential diagnosis.

NOTE Confidence: 0.9510886

00:33:05.960 --> 00:33:07.900 If you wanted a faculty to have a little bit

NOTE Confidence: 0.9510886

00:33:07.951 --> 00:33:09.715 of teaching points that they could give.

NOTE Confidence: 0.9510886

00:33:09.720 --> 00:33:11.995 Obviously they could add their own expertise,

NOTE Confidence: 0.9510886

00:33:12.000 --> 00:33:13.344 but I saw that and at

NOTE Confidence: 0.9510886

00:33:13.344 --> 00:33:14.240 least for case development,

NOTE Confidence: 0.9510886

00:33:14.240 --> 00:33:16.277 as someone who's involved in clinical skills,

NOTE Confidence: 0.9510886

00:33:16.280 --> 00:33:17.096 I was like,

NOTE Confidence: 0.9510886

00:33:17.096 --> 00:33:19.000 this is this is pretty good enough

NOTE Confidence: 0.9510886

00:33:19.062 --> 00:33:20.862 for me to pay 20 bucks a month

NOTE Confidence: 0.9510886

00:33:20.862 --> 00:33:22.199 now for a ChatGPT for.

NOTE Confidence: 0.9510886

00:33:22.200 --> 00:33:24.559 Since then I've used a few times

NOTE Confidence: 0.9510886

00:33:24.560 --> 00:33:25.706 creating facilitator guides.

NOTE Confidence: 0.9510886

00:33:25.706 --> 00:33:27.998 Literally after this we'll be doing

NOTE Confidence: 0.9510886

00:33:27.998 --> 00:33:30.239 a clinical reasoning session with

NOTE Confidence: 0.9510886

00:33:30.240 --> 00:33:31.860 one-on-one consultations between

NOTE Confidence: 0.9510886

00:33:31.860 --> 00:33:34.110 faculty and tutors, I think.

NOTE Confidence: 0.9510886

00:33:34.110 --> 00:33:36.960 And Elizabeth has a slot coming up soon too.

NOTE Confidence: 0.9510886

00:33:36.960 --> 00:33:39.840 And we use ChatGPT for the facilitator guide.

NOTE Confidence: 0.9510886

00:33:39.840 --> 00:33:41.880 I've used it to update curricula.

NOTE Confidence: 0.9510886

00:33:41.880 --> 00:33:42.628 For example,

NOTE Confidence: 0.9510886

00:33:42.628 --> 00:33:44.872 we have a session on Bayesian

NOTE Confidence: 0.9510886

00:33:44.872 --> 00:33:46.918 reasoning in the physical exam.

NOTE Confidence: 0.9510886

00:33:46.920 --> 00:33:49.377 I got feedback from learners on ways

NOTE Confidence: 0.9510886

00:33:49.377 --> 00:33:52.427 to improve and we use that to create

NOTE Confidence: 0.9510886

00:33:52.427 --> 00:33:54.352 new cases and learning objectives.

NOTE Confidence: 0.9510886

00:33:54.360 --> 00:33:56.880 I've used the prayer feedback on the wards,

NOTE Confidence: 0.9510886

00:33:56.880 --> 00:33:58.660 had a couple struggling learners

NOTE Confidence: 0.9510886

00:33:58.660 --> 00:34:00.440 and had to deliver feedback,

NOTE Confidence: 0.9510886

00:34:00.440 --> 00:34:03.200 and I put in like the pearls format,

NOTE Confidence: 0.9510886

00:34:03.200 --> 00:34:06.158 the go ask, tell, ask model.

NOTE Confidence: 0.9510886

00:34:06.160 --> 00:34:08.092 And just so I didn't have to

NOTE Confidence: 0.9510886

00:34:08.092 --> 00:34:09.920 perseverate on the hard discussion,

NOTE Confidence: 0.9510886

00:34:09.920 --> 00:34:11.846 I kind of had an idea of what might

NOTE Confidence: 0.9510886

00:34:11.846 --> 00:34:13.760 be some things that I could say.

NOTE Confidence: 0.9510886

00:34:13.760 --> 00:34:15.760 We've also had within our

NOTE Confidence: 0.9510886

00:34:15.760 --> 00:34:16.960 clinical reasoning course,

NOTE Confidence: 0.9510886

00:34:16.960 --> 00:34:18.520 one of our associate course directors,

NOTE Confidence: 0.9510886

00:34:18.520 --> 00:34:20.648 Darius developed some exercises

NOTE Confidence: 0.9510886

00:34:20.648 --> 00:34:24.280 around CHAP GBT 5 prompts and that

NOTE Confidence: 0.9510886

00:34:24.280 --> 00:34:26.638 I think our students found OK,

NOTE Confidence: 0.9510886

00:34:26.640 --> 00:34:28.516 Conrad and Elizabeth were in that class.

NOTE Confidence: 0.9510886

00:34:28.520 --> 00:34:30.038 I think it was like tolerable.

NOTE Confidence: 0.9510886

00:34:30.040 --> 00:34:32.168 But I think more than anything I

NOTE Confidence: 0.9510886

00:34:32.168 --> 00:34:34.511 realized from that is that we don't have

NOTE Confidence: 0.9510886

00:34:34.511 --> 00:34:36.719 to teach and use ChatGPT all the time.

NOTE Confidence: 0.9510886

00:34:36.720 --> 00:34:37.870 Our students are going to

NOTE Confidence: 0.9510886

00:34:37.870 --> 00:34:38.560 get that information.

NOTE Confidence: 0.9510886

00:34:38.560 --> 00:34:40.480 It's more important for us to,

NOTE Confidence: 0.9510886

00:34:40.480 --> 00:34:42.130 for them to learn somewhere along

NOTE Confidence: 0.9510886

00:34:42.130 --> 00:34:43.760 the lines about the concerns,

NOTE Confidence: 0.9510886

00:34:43.760 --> 00:34:45.860 earns and ways to use it and

NOTE Confidence: 0.9510886

00:34:45.860 --> 00:34:47.960 then for us to use it ourselves.

NOTE Confidence: 0.9510886

00:34:47.960 --> 00:34:49.436 And so with that in mind,

NOTE Confidence: 0.9510886

00:34:49.440 --> 00:34:52.002 when it comes to teaching and these

NOTE Confidence: 0.9510886

00:34:52.002 --> 00:34:53.936 are some general categories from

NOTE Confidence: 0.9510886

00:34:53.936 --> 00:34:56.430 a review or that came out or a

NOTE Confidence: 0.9510886

00:34:56.430 --> 00:34:58.102 perspective piece that came out in

NOTE Confidence: 0.9510886

00:34:58.102 --> 00:35:00.376 that kind of medicine in August from Bascard.

NOTE Confidence: 0.9510886

00:35:00.376 --> 00:35:02.116 And some opportunities for teaching,

NOTE Confidence: 0.9510886

00:35:02.120 --> 00:35:03.720 like I mentioned around

NOTE Confidence: 0.9510886

00:35:03.720 --> 00:35:05.320 curriculum development are there,

NOTE Confidence: 0.9510886

00:35:05.320 --> 00:35:06.241 But also evaluation.

NOTE Confidence: 0.9510886

00:35:06.241 --> 00:35:08.390 We can look at our curricula and

NOTE Confidence: 0.9510886

00:35:08.453 --> 00:35:10.598 eventually with large language files,

NOTE Confidence: 0.9510886

00:35:10.600 --> 00:35:12.200 if not already, say like, hey,

NOTE Confidence: 0.9510886

00:35:12.200 --> 00:35:14.000 are we meeting our goals,

NOTE Confidence: 0.9510886

00:35:14.000 --> 00:35:15.408 our educational program objectives?

NOTE Confidence: 0.9510886

00:35:15.408 --> 00:35:17.889 We can put our content in that

NOTE Confidence: 0.9510886

00:35:17.889 --> 00:35:18.798 and evaluate it.

NOTE Confidence: 0.9510886

00:35:18.800 --> 00:35:20.291 One conversation I've had a lot with

NOTE Confidence: 0.9510886

00:35:20.291 --> 00:35:21.759 David is around teaching framework.

NOTE Confidence: 0.9510886

00:35:21.760 --> 00:35:24.637 So we teach knowledge and medical education,

NOTE Confidence: 0.9510886

00:35:24.640 --> 00:35:26.470 but then eventually they have

NOTE Confidence: 0.9510886

00:35:26.470 --> 00:35:28.300 to practice and there's this

NOTE Confidence: 0.9510886

00:35:28.364 --> 00:35:30.746 huge space in between about how

NOTE Confidence: 0.9510886

00:35:30.746 --> 00:35:32.334 students synthesize and connect

NOTE Confidence: 0.953594303809523

00:35:32.403 --> 00:35:34.500 information. And that is a place

NOTE Confidence: 0.953594303809523

00:35:34.500 --> 00:35:35.840 where ChatGPT could really help.

NOTE Confidence: 0.953594303809523

00:35:35.840 --> 00:35:37.796 How do you interact with information?

NOTE Confidence: 0.953594303809523

00:35:37.800 --> 00:35:39.456 How can you make things iterative

NOTE Confidence: 0.953594303809523

00:35:39.456 --> 00:35:41.835 in ways that we can't do as faculty

NOTE Confidence: 0.953594303809523

00:35:41.835 --> 00:35:43.355 because we simply aren't there

NOTE Confidence: 0.953594303809523

00:35:43.355 --> 00:35:45.240 all the time with students now?

NOTE Confidence: 0.953594303809523

00:35:45.240 --> 00:35:46.640 So the concerns are there,

NOTE Confidence: 0.953594303809523

00:35:46.640 --> 00:35:48.320 the quality of the resources,

NOTE Confidence: 0.953594303809523

00:35:48.320 --> 00:35:49.409 information for sure.

NOTE Confidence: 0.953594303809523

00:35:49.409 --> 00:35:51.950 But I think a sneaky concern that

NOTE Confidence: 0.953594303809523

00:35:52.016 --> 00:35:54.280 comes up that I think is a good

NOTE Confidence: 0.953594303809523

00:35:54.280 --> 00:35:56.240 concern for us is that chat DVD

NOTE Confidence: 0.953594303809523

00:35:56.240 --> 00:35:58.310 can replace a lot of the stuff

NOTE Confidence: 0.953594303809523

00:35:58.310 --> 00:36:00.560 that we're already doing and that

NOTE Confidence: 0.953594303809523

00:36:00.560 --> 00:36:03.128 might increase the need for more in

NOTE Confidence: 0.953594303809523

00:36:03.128 --> 00:36:04.873 person faculty tasks like where's

NOTE Confidence: 0.953594303809523

00:36:04.947 --> 00:36:07.275 the real value in medical education?

NOTE Confidence: 0.953594303809523

00:36:07.280 --> 00:36:10.000 Is gonna come up more often than not.

NOTE Confidence: 0.953594303809523

00:36:10.000 --> 00:36:11.988 There's certainly gonna be

NOTE Confidence: 0.953594303809523

00:36:11.988 --> 00:36:13.479 opportunities in assessment,

NOTE Confidence: 0.953594303809523

00:36:13.480 --> 00:36:16.077 creating items which will talk about rubrics,

NOTE Confidence: 0.953594303809523

00:36:16.080 --> 00:36:18.040 providing feedback both in answers,

NOTE Confidence: 0.953594303809523

00:36:18.040 --> 00:36:19.797 keys or as Anne Elizabeth talked about,

NOTE Confidence: 0.953594303809523

00:36:19.800 --> 00:36:22.398 and more about personalized tutor mode.

NOTE Confidence: 0.953594303809523

00:36:22.400 --> 00:36:24.073 The way that you won't that you

NOTE Confidence: 0.953594303809523

00:36:24.073 --> 00:36:25.736 might have it in office hours if

NOTE Confidence: 0.953594303809523

00:36:25.736 --> 00:36:27.446 it was only you and the faculty

NOTE Confidence: 0.953594303809523

00:36:27.446 --> 00:36:29.036 member going back and forth,

NOTE Confidence: 0.953594303809523

00:36:29.040 --> 00:36:30.684 and so certainly there

NOTE Confidence: 0.953594303809523

00:36:30.684 --> 00:36:31.917 are opportunities there.

NOTE Confidence: 0.953594303809523

00:36:31.920 --> 00:36:34.956 The concerns as well arise between,

NOTE Confidence: 0.953594303809523

00:36:34.960 --> 00:36:35.776 for example,

NOTE Confidence: 0.953594303809523

00:36:35.776 --> 00:36:37.810 if you have open-ended answers,

NOTE Confidence: 0.953594303809523

00:36:37.810 --> 00:36:39.835 open-ended questions with answers to,

NOTE Confidence: 0.953594303809523

00:36:39.840 --> 00:36:42.248 they're going to have to be reviewed

NOTE Confidence: 0.953594303809523

00:36:42.248 --> 00:36:44.814 carefully for AI generation for the

NOTE Confidence: 0.953594303809523

00:36:44.814 --> 00:36:47.256 ability to to answer multiple choice

NOTE Confidence: 0.953594303809523

00:36:47.256 --> 00:36:49.520 questions clearly at a very high level.

NOTE Confidence: 0.953594303809523

00:36:49.520 --> 00:36:50.657 In my opinion,

NOTE Confidence: 0.953594303809523

00:36:50.657 --> 00:36:52.173 it's probably functioning somewhere

NOTE Confidence: 0.953594303809523

00:36:52.173 --> 00:36:54.627 between the level of a sub I and

NOTE Confidence: 0.953594303809523

00:36:54.627 --> 00:36:55.882 an intern at medical knowledge

NOTE Confidence: 0.953594303809523

00:36:55.939 --> 00:36:56.999 at least ChatGPT 4,

NOTE Confidence: 0.953594303809523

00:36:57.000 --> 00:36:57.840 so strengthening proctoring

NOTE Confidence: 0.953594303809523

00:36:57.840 --> 00:36:59.240 is going to come up.

NOTE Confidence: 0.953594303809523

00:36:59.240 --> 00:37:02.236 It hasn't done great with automating scoring,

NOTE Confidence: 0.953594303809523

00:37:02.240 --> 00:37:03.398 at least in our early studies,

NOTE Confidence: 0.953594303809523

00:37:03.400 --> 00:37:05.794 but I imagine it'll get better

NOTE Confidence: 0.953594303809523

00:37:05.794 --> 00:37:08.160 as our new technology improves.

NOTE Confidence: 0.953594303809523

00:37:08.160 --> 00:37:09.120 But I will say this,

NOTE Confidence: 0.953594303809523

00:37:09.120 --> 00:37:11.507 it is already starting to be used

NOTE Confidence: 0.953594303809523

00:37:11.507 --> 00:37:14.008 in programs of study for item

NOTE Confidence: 0.953594303809523

00:37:14.008 --> 00:37:15.876 assessment or item development.

NOTE Confidence: 0.953594303809523

00:37:15.880 --> 00:37:17.590 So this is from the University

NOTE Confidence: 0.953594303809523

00:37:17.590 --> 00:37:18.762 of Colorado's medical school.

NOTE Confidence: 0.953594303809523

00:37:18.762 --> 00:37:21.174 It's a paper that came out a medical

NOTE Confidence: 0.953594303809523

00:37:21.174 --> 00:37:23.274 teacher I think maybe two months ago.

NOTE Confidence: 0.953594303809523

00:37:23.280 --> 00:37:25.272 And for their five week reproductive

NOTE Confidence: 0.953594303809523

00:37:25.272 --> 00:37:28.244 course they had a total of 290 questions

NOTE Confidence: 0.953594303809523

00:37:28.244 --> 00:37:30.954 that were included across quizzes,

NOTE Confidence: 0.953594303809523

00:37:30.960 --> 00:37:32.172 across their qualifier,

NOTE Confidence: 0.953594303809523

00:37:32.172 --> 00:37:34.596 their final exams And they used

NOTE Confidence: 0.953594303809523

00:37:34.596 --> 00:37:36.998 ChatGPT to create some of those items,

NOTE Confidence: 0.953594303809523

00:37:37.000 --> 00:37:38.440 about 10% of them.

NOTE Confidence: 0.953594303809523

00:37:38.440 --> 00:37:40.600 And they used this flow chart,

NOTE Confidence: 0.953594303809523

00:37:40.600 --> 00:37:42.920 which isn't as serious as it seems and

NOTE Confidence: 0.953594303809523

00:37:42.920 --> 00:37:44.758 honestly not as detailed as it is.

NOTE Confidence: 0.953594303809523

00:37:44.760 --> 00:37:46.158 If you look at that paper,

NOTE Confidence: 0.953594303809523

00:37:46.160 --> 00:37:46.994 the prompt,

NOTE Confidence: 0.953594303809523

00:37:46.994 --> 00:37:49.913 this third purple box was very limited.

NOTE Confidence: 0.953594303809523

00:37:49.920 --> 00:37:52.860 It was give us a four sentence

NOTE Confidence: 0.953594303809523

00:37:52.860 --> 00:37:54.496 question on a reproductive system.

NOTE Confidence: 0.953594303809523

00:37:54.496 --> 00:37:56.819 So it didn't even specify in ways that

NOTE Confidence: 0.953594303809523

00:37:56.819 --> 00:37:59.200 I did like This is how I want to format,

NOTE Confidence: 0.953594303809523

00:37:59.200 --> 00:38:01.958 this is the specific topic within that.

NOTE Confidence: 0.953594303809523

00:38:01.960 --> 00:38:04.396 And yet they still used it.

NOTE Confidence: 0.953594303809523

00:38:04.400 --> 00:38:05.674 And when all was said and done,

NOTE Confidence: 0.953594303809523

00:38:05.680 --> 00:38:07.580 they found that these questions

NOTE Confidence: 0.953594303809523

00:38:07.580 --> 00:38:09.100 were similar and difficulty

NOTE Confidence: 0.953594303809523

00:38:09.100 --> 00:38:10.678 granted after expert review,

NOTE Confidence: 0.953594303809523

00:38:10.680 --> 00:38:12.393 assessment team review.

NOTE Confidence: 0.953594303809523

00:38:12.393 --> 00:38:15.816 And they found that the difficulty

NOTE Confidence: 0.953594303809523

00:38:15.816 --> 00:38:18.656 was similar and arguably more

NOTE Confidence: 0.953594303809523

00:38:18.656 --> 00:38:20.360 importantly the discrimination,

NOTE Confidence: 0.953594303809523

00:38:20.360 --> 00:38:22.160 the discrimination ability was similar.

NOTE Confidence: 0.953594303809523

00:38:22.160 --> 00:38:24.444 So between high performers

NOTE Confidence: 0.953594303809523

00:38:24.444 --> 00:38:26.157 and lower performers,

NOTE Confidence: 0.953594303809523

00:38:26.160 --> 00:38:27.760 the question performed similarly

NOTE Confidence: 0.953594303809523

00:38:27.760 --> 00:38:30.160 and faculty found it easy to

NOTE Confidence: 0.86732579

00:38:30.234 --> 00:38:32.330 use and saved a lot of time in

NOTE Confidence: 0.86732579

00:38:32.330 --> 00:38:33.557 their question development process.

NOTE Confidence: 0.86732579

00:38:33.557 --> 00:38:35.790 There are other ways that ChatGPT will

NOTE Confidence: 0.86732579

00:38:35.846 --> 00:38:37.676 certainly be used in medical education,

NOTE Confidence: 0.86732579

00:38:37.680 --> 00:38:39.752 probably beyond the scope of what we

NOTE Confidence: 0.86732579

00:38:39.752 --> 00:38:41.840 talked about in research authorship.

NOTE Confidence: 0.86732579

00:38:41.840 --> 00:38:43.220 I know journals are still trying

NOTE Confidence: 0.86732579

00:38:43.220 --> 00:38:44.640 to figure that out right now.

NOTE Confidence: 0.86732579

00:38:44.640 --> 00:38:47.680 Also in admissions as well.

NOTE Confidence: 0.86732579

00:38:47.680 --> 00:38:49.000 I think there is something to be said.

NOTE Confidence: 0.86732579

00:38:49.000 --> 00:38:50.744 I know there might be an initial concern

NOTE Confidence: 0.86732579

00:38:50.744 --> 00:38:52.630 that people are writing their personal

NOTE Confidence: 0.86732579

00:38:52.630 --> 00:38:54.034 statements with artificial intelligence,

NOTE Confidence: 0.86732579

00:38:54.040 --> 00:38:56.308 but I think there's a counter argument

NOTE Confidence: 0.86732579

00:38:56.308 --> 00:38:58.590 that actually can be good for reducing

NOTE Confidence: 0.86732579

00:38:58.590 --> 00:39:00.887 disparities for a lot of students who

NOTE Confidence: 0.86732579

00:39:00.887 --> 00:39:03.400 don't have the resources that maybe some

NOTE Confidence: 0.86732579

00:39:03.400 --> 00:39:05.880 universities have as far preparing their

NOTE Confidence: 0.86732579

00:39:05.880 --> 00:39:08.080 health profession students for application.

NOTE Confidence: 0.86732579

00:39:08.080 --> 00:39:09.600 So there's certainly other ways,

NOTE Confidence: 0.86732579

00:39:09.600 --> 00:39:12.000 but at least we focused here

NOTE Confidence: 0.86732579

00:39:12.000 --> 00:39:13.600 on teaching and assessment.

NOTE Confidence: 0.86732579

00:39:13.600 --> 00:39:14.620 So some takeaways,

NOTE Confidence: 0.86732579

00:39:14.620 --> 00:39:18.115 at least from my use and my reading of the

NOTE Confidence: 0.86732579

00:39:18.115 --> 00:39:21.359 room when it comes to ChatGPT is First off.

NOTE Confidence: 0.86732579

00:39:21.360 --> 00:39:23.474 Again, you're still in the early adopters,

NOTE Confidence: 0.86732579

00:39:23.480 --> 00:39:24.677 just try it.

NOTE Confidence: 0.86732579

00:39:24.677 --> 00:39:26.672 Remember that you don't need

NOTE Confidence: 0.86732579

00:39:26.672 --> 00:39:29.600 to be a super user right away.

NOTE Confidence: 0.86732579

00:39:29.600 --> 00:39:32.468 Also remember that what you're developing

NOTE Confidence: 0.86732579

00:39:32.468 --> 00:39:35.598 should be really seen as first steps,

NOTE Confidence: 0.86732579

00:39:35.600 --> 00:39:36.743 not final products,

NOTE Confidence: 0.86732579

00:39:36.743 --> 00:39:39.410 and that way you can use your

NOTE Confidence: 0.86732579

00:39:39.490 --> 00:39:42.244 time and expertise to edit and

NOTE Confidence: 0.86732579

00:39:42.244 --> 00:39:44.080 get higher quality products.

NOTE Confidence: 0.86732579

00:39:44.080 --> 00:39:45.295 Another thing I mentioned reinforcing

NOTE Confidence: 0.86732579

00:39:45.295 --> 00:39:46.800 with Dave and I talked about,

NOTE Confidence: 0.86732579

00:39:46.800 --> 00:39:48.840 it can be used for synthesis and framework,

NOTE Confidence: 0.86732579

00:39:48.840 --> 00:39:51.080 less so for primary information.

NOTE Confidence: 0.86732579

00:39:51.080 --> 00:39:52.622 I don't think that students are

NOTE Confidence: 0.86732579

00:39:52.622 --> 00:39:53.983 using it for primary information

NOTE Confidence: 0.86732579

00:39:53.983 --> 00:39:55.639 and we asked them about it.

NOTE Confidence: 0.86732579

00:39:55.640 --> 00:39:56.725 That's not how they said

NOTE Confidence: 0.86732579

00:39:56.725 --> 00:39:57.593 they're using as well.

NOTE Confidence: 0.86732579

00:39:57.600 --> 00:39:58.060 In fact,

NOTE Confidence: 0.86732579

00:39:58.060 --> 00:39:59.440 that's where they've been telling us.

NOTE Confidence: 0.86732579

00:39:59.440 --> 00:40:00.884 They've been skeptical too.

NOTE Confidence: 0.86732579

00:40:00.884 --> 00:40:03.548 It will force us to find where

NOTE Confidence: 0.86732579

00:40:03.548 --> 00:40:05.668 the limited resources are where

NOTE Confidence: 0.86732579

00:40:05.668 --> 00:40:07.919 students aren't able to use it.

NOTE Confidence: 0.86732579

00:40:07.920 --> 00:40:10.280 So just keep your eyes open for updates,

NOTE Confidence: 0.86732579

00:40:10.280 --> 00:40:12.956 but ask for help when available.

NOTE Confidence: 0.86732579

00:40:12.960 --> 00:40:14.288 And in this sense,

NOTE Confidence: 0.86732579

00:40:14.288 --> 00:40:16.280 a quick shout out to David,

NOTE Confidence: 0.86732579

00:40:16.280 --> 00:40:18.394 whose e-mail will be at the end,

NOTE Confidence: 0.86732579

00:40:18.400 --> 00:40:21.400 and other colleagues as far as keep your

NOTE Confidence: 0.86732579

00:40:21.400 --> 00:40:24.639 eyes open for opportunities to learn more.

NOTE Confidence: 0.86732579

00:40:24.640 --> 00:40:25.480 So with that in mind,

NOTE Confidence: 0.86732579

00:40:25.480 --> 00:40:27.694 I wanted to move on to just some examples

NOTE Confidence: 0.86732579

00:40:27.694 --> 00:40:29.960 so you can kind of see what I'm doing.

NOTE Confidence: 0.86732579

00:40:29.960 --> 00:40:31.400 I know I did some screenshots,

NOTE Confidence: 0.86732579

00:40:31.400 --> 00:40:33.472 but in addition to that I wanted to

NOTE Confidence: 0.86732579

00:40:33.472 --> 00:40:35.648 show you some examples of some of the

NOTE Confidence: 0.86732579

00:40:35.648 --> 00:40:37.926 chats that I did and see if maybe you

NOTE Confidence: 0.86732579

00:40:37.926 --> 00:40:40.520 can take a look at these and say you know,

NOTE Confidence: 0.86732579

00:40:40.520 --> 00:40:43.000 how helpful would it be.

NOTE Confidence: 0.86732579

00:40:43.000 --> 00:40:44.376 So in this example,

NOTE Confidence: 0.86732579

00:40:44.376 --> 00:40:46.096 a basic science lecture on

NOTE Confidence: 0.86732579

00:40:46.096 --> 00:40:47.639 water soluble vitamins,

NOTE Confidence: 0.86732579

00:40:47.640 --> 00:40:50.520 your vitamin BS, vitamin CS.

NOTE Confidence: 0.86732579

00:40:50.520 --> 00:40:52.608 If you wanted to help it

NOTE Confidence: 0.86732579

00:40:52.608 --> 00:40:54.000 create a lecture outline,

NOTE Confidence: 0.86732579

00:40:54.000 --> 00:40:56.288 this might be an example of what it

NOTE Confidence: 0.86732579

00:40:56.288 --> 00:40:59.360 would look like. So I give a prompt.

NOTE Confidence: 0.86732579

00:40:59.360 --> 00:41:00.700 I'm a faculty member.

NOTE Confidence: 0.86732579

00:41:00.700 --> 00:41:02.040 I have 60 minutes.

NOTE Confidence: 0.86732579

00:41:02.040 --> 00:41:03.342 I'm mostly didactic,

NOTE Confidence: 0.86732579

00:41:03.342 --> 00:41:05.078 little bit large group,

NOTE Confidence: 0.86732579

00:41:05.080 --> 00:41:07.537 but also I was able to put in a

NOTE Confidence: 0.86732579

00:41:07.537 --> 00:41:09.919 Yale School of Medicine educational

NOTE Confidence: 0.86732579

00:41:09.919 --> 00:41:12.459 program objective so that could

NOTE Confidence: 0.86732579

00:41:12.459 --> 00:41:15.320 help me make sure I'm hitting the

NOTE Confidence: 0.86732579

00:41:15.320 --> 00:41:17.666 right points and spit out this.

NOTE Confidence: 0.86732579

00:41:17.666 --> 00:41:19.318 So I'll wait for

NOTE Confidence: 0.84302166

00:41:19.320 --> 00:41:21.720 510 seconds to let you skim the links.

NOTE Confidence: 0.84302166

00:41:21.720 --> 00:41:23.897 David, would you mind throwing the link

NOTE Confidence: 0.84302166

00:41:23.897 --> 00:41:26.650 to this in the chat for our faculty?

NOTE Confidence: 0.84302166

00:41:26.650 --> 00:41:29.680 Take a look at another time.

NOTE Confidence: 0.84302166

00:41:29.680 --> 00:41:32.160 But at least for me, looking at this,

NOTE Confidence: 0.84302166

00:41:32.160 --> 00:41:35.180 I would give this maybe like a two 2 1/2.

NOTE Confidence: 0.84302166

00:41:35.180 --> 00:41:36.680 I don't really do lectures anymore,

NOTE Confidence: 0.84302166

00:41:36.680 --> 00:41:39.720 but if I had to make 60 slides on something,

NOTE Confidence: 0.84302166

00:41:39.720 --> 00:41:41.076 it would be helpful start to

NOTE Confidence: 0.84302166

00:41:41.076 --> 00:41:42.652 figure out what I should probably

NOTE Confidence: 0.84302166

00:41:42.652 --> 00:41:44.197 think about putting into it,

NOTE Confidence: 0.84302166

00:41:44.200 --> 00:41:46.880 maybe with my own resources.

NOTE Confidence: 0.84302166

00:41:46.880 --> 00:41:49.913 Now let's say I wanted to add some cases.

NOTE Confidence: 0.84302166

00:41:49.920 --> 00:41:51.480 Let's write some cases, let's not.

NOTE Confidence: 0.84302166

00:41:51.480 --> 00:41:52.920 I don't want them to be too long.

NOTE Confidence: 0.84302166

00:41:52.920 --> 00:41:54.355 I want to chance always told me,

NOTE Confidence: 0.84302166

00:41:54.360 --> 00:41:55.736 God, I got to make sure I keep

NOTE Confidence: 0.84302166

00:41:55.736 --> 00:41:57.040 the words on my slides limited.

NOTE Confidence: 0.84302166

00:41:57.040 --> 00:41:59.050 So let's only make it 250 words.

NOTE Confidence: 0.84302166

00:41:59.050 --> 00:42:01.810 Let's see what a case might look like

NOTE Confidence: 0.84302166

00:42:01.884 --> 00:42:04.758 on thiamine deficiency or B6 deficiency.

NOTE Confidence: 0.84302166

00:42:04.760 --> 00:42:07.798 And the first paragraph is a case,

NOTE Confidence: 0.84302166

00:42:07.800 --> 00:42:09.336 and for me and this is a person

NOTE Confidence: 0.84302166

00:42:09.336 --> 00:42:10.040 who writes cases,

NOTE Confidence: 0.84302166

00:42:10.040 --> 00:42:12.637 who talks to colleagues around the country,

NOTE Confidence: 0.84302166

00:42:12.640 --> 00:42:13.510 for example,

NOTE Confidence: 0.84302166

00:42:13.510 --> 00:42:16.120 the clinical problem solvers at UCSF.

NOTE Confidence: 0.84302166

00:42:16.120 --> 00:42:18.010 They've told me that you don't

NOTE Confidence: 0.84302166

00:42:18.010 --> 00:42:20.280 really need to have a perfect case.

NOTE Confidence: 0.84302166

00:42:20.280 --> 00:42:21.260 You can tweak cases,

NOTE Confidence: 0.84302166

00:42:21.260 --> 00:42:22.730 you can adjust them for what

NOTE Confidence: 0.84302166

00:42:22.787 --> 00:42:23.639 you need to know.

NOTE Confidence: 0.84302166

00:42:23.640 --> 00:42:25.800 This is more than enough initially,

NOTE Confidence: 0.84302166

00:42:25.800 --> 00:42:27.834 and I can add and change some things to

NOTE Confidence: 0.84302166

00:42:27.834 --> 00:42:29.591 make it more representative based off

NOTE Confidence: 0.84302166

00:42:29.591 --> 00:42:31.679 of my own expertise with this topic.

NOTE Confidence: 0.84302166

00:42:31.680 --> 00:42:33.556 So I'd give this maybe a three

NOTE Confidence: 0.939190502222222

00:42:35.920 --> 00:42:37.918 then let's say I want to write a question.

NOTE Confidence: 0.939190502222222

00:42:37.920 --> 00:42:39.719 Now, one way that we can get

NOTE Confidence: 0.939190502222222

00:42:39.719 --> 00:42:41.160 faculty to buying in general,

NOTE Confidence: 0.939190502222222

00:42:41.160 --> 00:42:43.432 to medication, to medication,

NOTE Confidence: 0.939190502222222

00:42:43.432 --> 00:42:46.702 to our educational content is that it can

NOTE Confidence: 0.939190502222222

00:42:46.702 --> 00:42:49.757 relate to them and what their needs are.

NOTE Confidence: 0.939190502222222

00:42:49.760 --> 00:42:51.640 And so one thing you could ask it is hey,

NOTE Confidence: 0.939190502222222

00:42:51.640 --> 00:42:54.320 like let's make this format,

NOTE Confidence: 0.939190502222222

00:42:54.320 --> 00:42:56.996 USM LE1 style, USML E2 style.

NOTE Confidence: 0.939190502222222

00:42:57.000 --> 00:42:58.519 And you can at least say that

NOTE Confidence: 0.939190502222222

00:42:58.519 --> 00:42:59.600 to your students as well.

NOTE Confidence: 0.939190502222222

00:42:59.600 --> 00:43:01.798 And that might make them more interested

NOTE Confidence: 0.939190502222222

00:43:01.800 --> 00:43:03.640 and increase their motivation for

NOTE Confidence: 0.939190502222222

00:43:03.640 --> 00:43:05.480 doing some of those questions.

NOTE Confidence: 0.939190502222222

00:43:05.480 --> 00:43:06.560 And even more than that,

NOTE Confidence: 0.939190502222222

00:43:06.560 --> 00:43:09.278 you can see it can create tables for you.

NOTE Confidence: 0.939190502222222

00:43:09.280 --> 00:43:11.100 Now I certainly would adjust

NOTE Confidence: 0.939190502222222

00:43:11.100 --> 00:43:12.556 and edit this table,

NOTE Confidence: 0.939190502222222

00:43:12.560 --> 00:43:14.176 but it would give me a good start

NOTE Confidence: 0.939190502222222

00:43:14.176 --> 00:43:16.128 if I wanted to have an answer.

NOTE Confidence: 0.939190502222222

00:43:16.128 --> 00:43:17.808 Key of illness scripts for

NOTE Confidence: 0.939190502222222

00:43:17.808 --> 00:43:20.579 any of these given vitamins on

NOTE Confidence: 0.939190502222222

00:43:20.579 --> 00:43:22.607 deficiency specifically range from

NOTE Confidence: 0.939190502222222

00:43:22.607 --> 00:43:25.000 epidemiology to diagnostic testing.

NOTE Confidence: 0.939190502222222

00:43:25.000 --> 00:43:26.248 So all of this,

NOTE Confidence: 0.939190502222222

00:43:26.248 --> 00:43:28.920 it was created in less than 5 minutes.

NOTE Confidence: 0.939190502222222

00:43:28.920 --> 00:43:30.516 It might have taken a little

NOTE Confidence: 0.939190502222222

00:43:30.516 --> 00:43:32.568 bit longer if I had it truly

NOTE Confidence: 0.939190502222222

00:43:32.568 --> 00:43:34.566 searched through all of like USM,

NOTE Confidence: 0.939190502222222

00:43:34.566 --> 00:43:36.796 LE1 parameters through their database,

NOTE Confidence: 0.939190502222222

00:43:36.800 --> 00:43:41.720 but you can see that it certainly is a star.

NOTE Confidence: 0.939190502222222

00:43:41.720 --> 00:43:43.358 And so as we're nearing the end,

NOTE Confidence: 0.939190502222222

00:43:43.360 --> 00:43:45.124 I do want to move on to a large

NOTE Confidence: 0.939190502222222

00:43:45.124 --> 00:43:46.615 room discussion 'cause I know

NOTE Confidence: 0.939190502222222

00:43:46.615 --> 00:43:48.475 the chat has been pretty active.

NOTE Confidence: 0.939190502222222

00:43:48.480 --> 00:43:50.706 So we'll skip our second case

NOTE Confidence: 0.939190502222222

00:43:50.706 --> 00:43:52.994 though David put one in the

NOTE Confidence: 0.939190502222222

00:43:52.994 --> 00:43:54.799 chat of a clinical example.

NOTE Confidence: 0.939190502222222

00:43:54.800 --> 00:43:57.520 But for a large group discussion,

NOTE Confidence: 0.939190502222222

00:43:57.520 --> 00:43:59.613 I'd love to hear from y'all about

NOTE Confidence: 0.939190502222222

00:43:59.613 --> 00:44:01.187 seeing from the students and

NOTE Confidence: 0.939190502222222

00:44:01.187 --> 00:44:02.562 now the educator's perspective.

NOTE Confidence: 0.939190502222222

00:44:02.562 --> 00:44:04.467 What are your impressions of

NOTE Confidence: 0.939190502222222

00:44:04.467 --> 00:44:06.080 ChatGPT for creating content?

NOTE Confidence: 0.939190502222222

00:44:06.080 --> 00:44:08.460 Would you use it in your own

NOTE Confidence: 0.939190502222222

00:44:08.460 --> 00:44:09.480 educational practice now?

NOTE Confidence: 0.939190502222222

00:44:09.480 --> 00:44:11.496 And what are some next steps

NOTE Confidence: 0.939190502222222

00:44:11.496 --> 00:44:13.756 that you think EOS Good Medicine

NOTE Confidence: 0.939190502222222

00:44:13.756 --> 00:44:16.276 should be looking at for ChatGPT?

NOTE Confidence: 0.939190502222222

00:44:16.280 --> 00:44:17.240 So what do y'all think?

NOTE Confidence: 0.787050246666667

00:44:25.520 --> 00:44:27.716 So thalan, I love Gary's question,

NOTE Confidence: 0.787050246666667

00:44:27.720 --> 00:44:29.820 he says, Curious how much of

NOTE Confidence: 0.787050246666667

00:44:29.820 --> 00:44:32.080 this talk was AI generated?

NOTE Confidence: 0.793840756470588

00:44:33.000 --> 00:44:35.135 So I would say our cases obviously

NOTE Confidence: 0.793840756470588

00:44:35.135 --> 00:44:37.026 are that we plugged into Chat

NOTE Confidence: 0.793840756470588

00:44:37.026 --> 00:44:39.024 chi BT but no, at least none of

NOTE Confidence: 0.793840756470588

00:44:39.024 --> 00:44:40.440 my slides where I had to use,

NOTE Confidence: 0.793840756470588

00:44:40.440 --> 00:44:42.320 you know, this one myself.

NOTE Confidence: 0.793840756470588

00:44:42.320 --> 00:44:44.315 But I don't know Conrad and Elizabeth,

NOTE Confidence: 0.793840756470588

00:44:44.320 --> 00:44:45.544 Did you use Chat Chi T

NOTE Confidence: 0.793840756470588

00:44:45.544 --> 00:44:46.800 for any of your slides?

NOTE Confidence: 0.891025394545454

00:44:47.840 --> 00:44:49.268 They didn't make any of the

NOTE Confidence: 0.891025394545454

00:44:49.268 --> 00:44:50.480 slides one place we did.

NOTE Confidence: 0.891025394545454

00:44:50.480 --> 00:44:52.168 I had a few conversations back and

NOTE Confidence: 0.891025394545454

00:44:52.168 --> 00:44:53.480 forth when, like brainstorming

NOTE Confidence: 0.891025394545454

00:44:53.480 --> 00:44:55.472 ideas on how Chatship team might

NOTE Confidence: 0.891025394545454

00:44:55.472 --> 00:44:57.520 be used in medical education.

NOTE Confidence: 0.891025394545454

00:44:57.520 --> 00:44:59.396 So that was one place where I

NOTE Confidence: 0.891025394545454

00:44:59.400 --> 00:45:00.954 don't know if it added any ideas,

NOTE Confidence: 0.891025394545454

00:45:00.960 --> 00:45:03.214 but was reassuring that we'd thought of

NOTE Confidence: 0.891025394545454

00:45:03.214 --> 00:45:05.759 most of the ideas that came up with.

NOTE Confidence: 0.891025394545454

00:45:05.760 --> 00:45:07.160 We thought of them already.

NOTE Confidence: 0.891025394545454

00:45:07.160 --> 00:45:09.040 So that was one place we used it.

NOTE Confidence: 0.891025394545454

00:45:09.040 --> 00:45:10.558 But good question.

NOTE Confidence: 0.81931465125

00:45:11.360 --> 00:45:12.950 And I will say Comrade and

NOTE Confidence: 0.81931465125

00:45:12.950 --> 00:45:14.341 Elizabeth have been giving this

NOTE Confidence: 0.81931465125

00:45:14.341 --> 00:45:15.716 talk in a couple iterations.

NOTE Confidence: 0.81931465125

00:45:15.720 --> 00:45:17.768 So this is not the first time if

NOTE Confidence: 0.81931465125

00:45:17.768 --> 00:45:19.720 it seems too smooth to be real.

NOTE Confidence: 0.81931465125

00:45:19.720 --> 00:45:21.640 It's just their practice and expertise.

NOTE Confidence: 0.78669039

00:45:24.760 --> 00:45:27.478 Awesome. Allison, you have a question.

NOTE Confidence: 0.510802665

00:45:28.920 --> 00:45:29.960 Hi, Salon, thank you

NOTE Confidence: 0.894804778

00:45:29.960 --> 00:45:31.608 so much. And and to all

NOTE Confidence: 0.894804778

00:45:31.608 --> 00:45:32.600 of our presenters today,

NOTE Confidence: 0.894804778

00:45:32.600 --> 00:45:33.920 this is just really,

NOTE Confidence: 0.894804778

00:45:33.920 --> 00:45:36.086 really interesting and I

NOTE Confidence: 0.894804778

00:45:36.086 --> 00:45:37.716 appreciate the time it took

NOTE Confidence: 0.82738509

00:45:37.720 --> 00:45:40.144 to prepare this. I do have a

NOTE Confidence: 0.82738509

00:45:40.144 --> 00:45:41.504 question Thelan being on the

NOTE Confidence: 0.82738509

00:45:41.504 --> 00:45:42.680 continuing professional development

NOTE Confidence: 0.82738509

00:45:42.680 --> 00:45:44.680 side and thinking of our faculty

NOTE Confidence: 0.88789942

00:45:45.600 --> 00:45:48.480 and I've used it once one of I was a one,

NOTE Confidence: 0.6675834

00:45:50.760 --> 00:45:52.480 but there's so much opportunity,

NOTE Confidence: 0.965469378333333

00:45:52.480 --> 00:45:54.238 but I think it's a vulnerability

NOTE Confidence: 0.947570513

00:45:54.280 --> 00:45:57.520 of saying I don't know how to do this and

NOTE Confidence: 0.958260628333333

00:45:57.520 --> 00:46:00.720 how to best prepare. So from Acme side,

NOTE Confidence: 0.970387065

00:46:00.960 --> 00:46:04.040 how can we provide those opportunities

NOTE Confidence: 0.970387065

00:46:04.040 --> 00:46:08.000 to teach our faculty and to be

NOTE Confidence: 0.970387065

00:46:08.000 --> 00:46:10.760 vulnerable and to say you don't know and

NOTE Confidence: 0.76795919

00:46:10.760 --> 00:46:12.836 still find a a best practice

NOTE Confidence: 0.909958432

00:46:12.840 --> 00:46:14.680 for integrating this in, even

NOTE Confidence: 0.862084191111111

00:46:14.680 --> 00:46:17.165 if it's very slowly and

NOTE Confidence: 0.862084191111111

00:46:17.165 --> 00:46:19.480 will take some time. Yeah,

NOTE Confidence: 0.899787772

00:46:19.480 --> 00:46:20.232 we're figuring this out

NOTE Confidence: 0.899787772

00:46:20.232 --> 00:46:21.360 on your own by the way.

NOTE Confidence: 0.899787772

00:46:21.360 --> 00:46:23.397 If you have questions for specific people,

NOTE Confidence: 0.899787772

00:46:23.400 --> 00:46:25.758 feel free to like put that in the comment

NOTE Confidence: 0.899787772

00:46:25.760 --> 00:46:28.238 box with your question or ask initially.

NOTE Confidence: 0.899787772

00:46:28.240 --> 00:46:29.084 I'll take this one.

NOTE Confidence: 0.899787772

00:46:29.084 --> 00:46:30.385 I guess initially, Allison,

NOTE Confidence: 0.899787772

00:46:30.385 --> 00:46:35.040 I'll say that we're all learning together

NOTE Confidence: 0.899787772

00:46:35.040 --> 00:46:37.407 and I think it might be a little bit

NOTE Confidence: 0.899787772

00:46:37.407 --> 00:46:39.357 bumpy as we create more content.

NOTE Confidence: 0.899787772

00:46:39.360 --> 00:46:41.480 I've seen other institution workshops,

NOTE Confidence: 0.899787772

00:46:41.480 --> 00:46:43.095 they'll have these like playgrounds

NOTE Confidence: 0.899787772

00:46:43.095 --> 00:46:45.306 where they'll give an open space and

NOTE Confidence: 0.899787772

00:46:45.306 --> 00:46:47.203 all faculty can kind of use whatever

NOTE Confidence: 0.899787772

00:46:47.203 --> 00:46:48.801 tools that they're working on at

NOTE Confidence: 0.899787772

00:46:48.801 --> 00:46:50.613 any given time and ask questions

NOTE Confidence: 0.899787772

00:46:50.613 --> 00:46:53.278 to someone who's hosting it.

NOTE Confidence: 0.899787772

00:46:53.280 --> 00:46:54.708 And some people will just like take

NOTE Confidence: 0.899787772

00:46:54.708 --> 00:46:56.240 those links and go offline and use it.

NOTE Confidence: 0.899787772

00:46:56.240 --> 00:46:57.611 And that's OK.

NOTE Confidence: 0.899787772

00:46:57.611 --> 00:47:00.353 But I think just having low

NOTE Confidence: 0.899787772

00:47:00.360 --> 00:47:01.932 requirements or expectations and

NOTE Confidence: 0.899787772

00:47:01.932 --> 00:47:04.290 just having a lot of opportunities

NOTE Confidence: 0.899787772

00:47:04.357 --> 00:47:06.117 is just the best way to do it.

NOTE Confidence: 0.899787772

00:47:06.120 --> 00:47:06.364 David,

NOTE Confidence: 0.899787772

00:47:06.364 --> 00:47:08.560 I know you've like thought about this a lot.

NOTE Confidence: 0.899787772

00:47:08.560 --> 00:47:10.184 What do you think would be a

NOTE Confidence: 0.899787772

00:47:10.184 --> 00:47:11.552 good approach for helping our

NOTE Confidence: 0.899787772

00:47:11.552 --> 00:47:13.232 faculty learn about ChatGPT and

NOTE Confidence: 0.899787772

00:47:13.232 --> 00:47:15.200 other like large language models?

NOTE Confidence: 0.850637654

00:47:16.120 --> 00:47:17.544 So first point, do you mind

NOTE Confidence: 0.850637654

00:47:17.544 --> 00:47:19.310 taking down the slides so we can

NOTE Confidence: 0.850637654

00:47:19.310 --> 00:47:20.760 see everybody in in panorama.

NOTE Confidence: 0.850637654

00:47:20.760 --> 00:47:25.960 The the easy answer to that is everybody's

NOTE Confidence: 0.850637654

00:47:25.960 --> 00:47:28.199 talking about it from the Porvu Center,

NOTE Confidence: 0.850637654

00:47:28.200 --> 00:47:31.398 from us to from the larger groups

NOTE Confidence: 0.850637654

00:47:31.398 --> 00:47:33.192 within the Faculty of Arts and

NOTE Confidence: 0.850637654

00:47:33.192 --> 00:47:35.243 Science and there's been a lot of

NOTE Confidence: 0.850637654

00:47:35.243 --> 00:47:37.120 communities built as a product of that.

NOTE Confidence: 0.850637654

00:47:37.120 --> 00:47:39.430 The the I'll, I'll say the section

NOTE Confidence: 0.850637654

00:47:39.430 --> 00:47:40.766 for Biomedical Informatics and

NOTE Confidence: 0.850637654

00:47:40.766 --> 00:47:42.470 Data Science should be your first

NOTE Confidence: 0.850637654

00:47:42.470 --> 00:47:44.720 stop because we're here to help.

NOTE Confidence: 0.850637654

00:47:44.720 --> 00:47:47.058 You know myself as well as others

NOTE Confidence: 0.850637654

00:47:47.058 --> 00:47:49.492 are have been using large language

NOTE Confidence: 0.850637654

00:47:49.492 --> 00:47:52.198 models before chat EBT ever existed.

NOTE Confidence: 0.850637654

00:47:52.200 --> 00:47:54.536 So if you would like that kind of

NOTE Confidence: 0.850637654

00:47:54.536 --> 00:47:56.568 opinion or that kind of expertise

NOTE Confidence: 0.850637654

00:47:56.568 --> 00:47:58.638 to join you please reach out.

NOTE Confidence: 0.850637654

00:47:58.640 --> 00:48:00.200 I am happy to help.

NOTE Confidence: 0.850637654

00:48:00.200 --> 00:48:02.006 I believe the slide deck will be

NOTE Confidence: 0.850637654

00:48:02.006 --> 00:48:04.079 shared at the end my phone number and

NOTE Confidence: 0.850637654

00:48:04.079 --> 00:48:07.240 e-mail or at the end of everything.

NOTE Confidence: 0.850637654

00:48:07.240 --> 00:48:08.768 Very happy to help.

NOTE Confidence: 0.850637654

00:48:08.768 --> 00:48:09.914 While I'm talking,

NOTE Confidence: 0.850637654

00:48:09.920 --> 00:48:12.678 let me quickly also mention that within

NOTE Confidence: 0.850637654

00:48:12.678 --> 00:48:14.783 the larger strategic partnership between

NOTE Confidence: 0.850637654

00:48:14.783 --> 00:48:18.199 the health system and the School of Medicine,

NOTE Confidence: 0.850637654

00:48:18.200 --> 00:48:22.085 there are capacities to use

NOTE Confidence: 0.850637654

00:48:22.085 --> 00:48:25.696 LLMS with Phi with, you know,

NOTE Confidence: 0.850637654

00:48:25.696 --> 00:48:28.266 proprietary resources within the School

NOTE Confidence: 0.850637654

00:48:28.266 --> 00:48:31.599 of Medicine that are being explored.

NOTE Confidence: 0.850637654

00:48:31.600 --> 00:48:32.100 You know,

NOTE Confidence: 0.850637654

00:48:32.100 --> 00:48:34.480 like I can't even begin to name the whole

NOTE Confidence: 0.850637654

00:48:34.480 --> 00:48:36.720 list of people involved in this process,

NOTE Confidence: 0.850637654

00:48:36.720 --> 00:48:38.984 but through Biomedical

NOTE Confidence: 0.850637654

00:48:38.984 --> 00:48:40.200 Informatics and Data science,

NOTE Confidence: 0.850637654

00:48:40.200 --> 00:48:42.213 through the YNHH,

NOTE Confidence: 0.850637654

00:48:42.213 --> 00:48:44.897 Medical Information Officers and

NOTE Confidence: 0.850637654

00:48:44.897 --> 00:48:47.480 Digital Transformation Solutions folks,

NOTE Confidence: 0.850637654

00:48:47.480 --> 00:48:48.293 it is happening.

NOTE Confidence: 0.850637654

00:48:48.293 --> 00:48:49.919 If you want to be involved,

NOTE Confidence: 0.850637654

00:48:49.920 --> 00:48:51.438 if you want to be connected,

NOTE Confidence: 0.850637654

00:48:51.440 --> 00:48:52.784 reach out and I will do my best

NOTE Confidence: 0.850637654

00:48:52.784 --> 00:48:54.238 to get you to the right person.

NOTE Confidence: 0.920185543

00:48:55.720 --> 00:48:57.544 So for questions, maybe

NOTE Confidence: 0.920185543

00:48:57.544 --> 00:49:00.280 we can go to Dana next.

NOTE Confidence: 0.898594045

00:49:03.040 --> 00:49:04.576 Thanks for the presentation.

NOTE Confidence: 0.898594045

00:49:04.576 --> 00:49:06.880 With respect to challenges and applications,

NOTE Confidence: 0.898594045

00:49:06.880 --> 00:49:08.994 a quick thing that came to mind

NOTE Confidence: 0.898594045

00:49:08.994 --> 00:49:11.172 as a recent clerkship director and

NOTE Confidence: 0.898594045

00:49:11.172 --> 00:49:13.137 trying to embrace more holistic

NOTE Confidence: 0.898594045

00:49:13.137 --> 00:49:15.069 inclusion of social determinants of

NOTE Confidence: 0.898594045

00:49:15.069 --> 00:49:16.914 health into our clinical teaching.

NOTE Confidence: 0.898594045

00:49:16.920 --> 00:49:18.320 And I know Sheila Gupta,

NOTE Confidence: 0.898594045

00:49:18.320 --> 00:49:19.839 who's working on our masters right now,

NOTE Confidence: 0.898594045

00:49:19.840 --> 00:49:21.632 is working on this whole project of

NOTE Confidence: 0.898594045

00:49:21.632 --> 00:49:23.303 how to develop faculty to include

NOTE Confidence: 0.898594045

00:49:23.303 --> 00:49:25.277 this kind of thing in their content.

NOTE Confidence: 0.898594045

00:49:25.280 --> 00:49:27.107 And it seems so massive to train

NOTE Confidence: 0.898594045

00:49:27.107 --> 00:49:28.748 everyone and to like find all

NOTE Confidence: 0.898594045

00:49:28.748 --> 00:49:30.073 the articles to put them.

NOTE Confidence: 0.898594045

00:49:30.080 --> 00:49:32.960 So it just seems like a really good

NOTE Confidence: 0.898594045

00:49:32.960 --> 00:49:35.180 potential application if you can train

NOTE Confidence: 0.898594045

00:49:35.180 --> 00:49:38.160 it to for this individual content,

NOTE Confidence: 0.898594045

00:49:38.160 --> 00:49:40.466 can you incorporate and incorporate

NOTE Confidence: 0.898594045

00:49:40.466 --> 00:49:41.718 social determinism of health?

NOTE Confidence: 0.898594045

00:49:41.720 --> 00:49:44.671 It would really help a lot of faculty to

NOTE Confidence: 0.898594045

00:49:44.671 --> 00:49:47.479 some of those EP OS and curricular demands.

NOTE Confidence: 0.898594045

00:49:47.480 --> 00:49:49.440 So I love that possibility.

NOTE Confidence: 0.669335784

00:49:50.240 --> 00:49:51.120 And then to that point,

NOTE Confidence: 0.669335784

00:49:51.120 --> 00:49:54.232 we just had a case that like was

NOTE Confidence: 0.669335784

00:49:54.232 --> 00:49:56.352 written by faculty specialists that

NOTE Confidence: 0.669335784

00:49:56.352 --> 00:50:00.196 had some issues as far as like bias and

NOTE Confidence: 0.669335784

00:50:00.196 --> 00:50:02.297 sigmatizing language goes and actually

NOTE Confidence: 0.669335784

00:50:02.297 --> 00:50:04.448 to one hand developing case to ChatGPT

NOTE Confidence: 0.669335784

00:50:04.448 --> 00:50:06.352 allows you to spend more time looking

NOTE Confidence: 0.669335784

00:50:06.352 --> 00:50:08.319 at that instead of creating the content.

NOTE Confidence: 0.669335784

00:50:08.320 --> 00:50:10.160 But also like Conrad and

NOTE Confidence: 0.669335784

00:50:10.160 --> 00:50:11.632 and Elizabeth have said,

NOTE Confidence: 0.669335784

00:50:11.640 --> 00:50:13.350 we can ask follow up questions

NOTE Confidence: 0.669335784

00:50:13.350 --> 00:50:15.080 to it and for example,

NOTE Confidence: 0.669335784

00:50:15.080 --> 00:50:16.914 input like watch out for these types

NOTE Confidence: 0.669335784

00:50:16.914 --> 00:50:18.324 of terms, these type of themes.

NOTE Confidence: 0.669335784

00:50:18.324 --> 00:50:20.101 So it can actually be helpful in that

NOTE Confidence: 0.669335784

00:50:20.101 --> 00:50:21.515 sense too if you're on the lookout

NOTE Confidence: 0.9333403

00:50:24.520 --> 00:50:27.120 Gary. So one

NOTE Confidence: 0.930902304166667

00:50:27.120 --> 00:50:29.192 of the questions that I see coming

NOTE Confidence: 0.930902304166667

00:50:29.192 --> 00:50:31.230 up most often regarding AI is sort

NOTE Confidence: 0.930902304166667

00:50:31.230 --> 00:50:33.849 of the ethics of it and I I deeply

NOTE Confidence: 0.930902304166667

00:50:33.849 --> 00:50:35.732 recognize that were very early in the

NOTE Confidence: 0.930902304166667

00:50:35.732 --> 00:50:38.003 world of AI to to really substantively

NOTE Confidence: 0.930902304166667

00:50:38.003 --> 00:50:40.400 we have those conversations.

NOTE Confidence: 0.930902304166667

00:50:40.400 --> 00:50:43.396 But I'm wondering how each of you

NOTE Confidence: 0.930902304166667

00:50:43.396 --> 00:50:45.480 are managing transparency with this.

NOTE Confidence: 0.930902304166667

00:50:45.480 --> 00:50:47.676 And I mean, I tried writing a letter of

NOTE Confidence: 0.930902304166667

00:50:47.676 --> 00:50:49.230 recommendation this year using ChatGPT

NOTE Confidence: 0.930902304166667

00:50:49.230 --> 00:50:52.380 and I just there was like a a deep

NOTE Confidence: 0.930902304166667

00:50:52.463 --> 00:50:55.440 almost dirty feeling doing it and so

NOTE Confidence: 0.930902304166667

00:50:55.440 --> 00:50:57.756 how how are you approaching transparency

NOTE Confidence: 0.938175506666667

00:50:57.760 --> 00:50:59.278 with with this

00:51:00.520 --> 00:51:01.408 Conrad man? Elizabeth what

00:51:01.408 --> 00:51:02.518 do you think about that?

00:51:06.040 --> 00:51:06.620 Definitely something.

00:51:06.620 --> 00:51:08.650 But I think there needs to be

00:51:08.650 --> 00:51:10.094 better guidelines about like I

00:51:10.094 --> 00:51:11.744 think people need to think more

00:51:11.798 --> 00:51:13.398 about how we're addressing this.

00:51:13.400 --> 00:51:14.852 The first thing that comes to

00:51:14.852 --> 00:51:16.400 mind is like research literature.

00:51:16.400 --> 00:51:18.305 Different journals are dealing with

00:51:18.305 --> 00:51:21.319 this in very ad hoc different ways,

00:51:21.320 --> 00:51:23.600 and a recent submission I did,

00:51:23.600 --> 00:51:26.204 they asked for every ChatGPT log I'd

00:51:26.204 --> 00:51:29.088 had related to the content of the

00:51:29.088 --> 00:51:31.198 research that we were submitting.

00:51:31.200 --> 00:51:32.640 And that was a really extensive.

NOTE Confidence: 0.9284883084

00:51:32.640 --> 00:51:35.376 I'd gone back and forward a lot with

NOTE Confidence: 0.9284883084

00:51:35.376 --> 00:51:37.460 ChatGPT asking questions about like

NOTE Confidence: 0.9284883084

00:51:37.460 --> 00:51:39.635 how to analyse statistical results.

NOTE Confidence: 0.9284883084

00:51:39.640 --> 00:51:41.476 It's really good at statistics too,

NOTE Confidence: 0.9284883084

00:51:41.480 --> 00:51:43.600 again needing to be corroborated,

NOTE Confidence: 0.9284883084

00:51:43.600 --> 00:51:47.032 but it is a complex question and I think

NOTE Confidence: 0.9284883084

00:51:47.032 --> 00:51:48.399 better guidelines need to be developed.

NOTE Confidence: 0.941669352

00:51:49.600 --> 00:51:51.280 I really agree with that.

NOTE Confidence: 0.941669352

00:51:51.280 --> 00:51:53.424 But I think, I mean Yale is one

NOTE Confidence: 0.941669352

00:51:53.424 --> 00:51:55.615 of the most prestigious academic

NOTE Confidence: 0.941669352

00:51:55.615 --> 00:51:57.715 institutions in the world.

NOTE Confidence: 0.941669352

00:51:57.720 --> 00:52:01.646 And I think like enforcing that above

NOTE Confidence: 0.941669352

00:52:01.646 --> 00:52:04.424 all we stand for academic integrity

NOTE Confidence: 0.941669352

00:52:04.424 --> 00:52:07.318 and personal integrity as physicians.

NOTE Confidence: 0.941669352

00:52:07.320 --> 00:52:09.880 And I think you know,

NOTE Confidence: 0.941669352

00:52:09.880 --> 00:52:13.330 essentially encouraging students

NOTE Confidence: 0.941669352

00:52:13.330 --> 00:52:17.036 to be to to act in a way that is

NOTE Confidence: 0.941669352

00:52:17.036 --> 00:52:18.977 consistent with those values and

NOTE Confidence: 0.941669352

00:52:18.977 --> 00:52:20.862 also to take personal responsibility

NOTE Confidence: 0.941669352

00:52:20.862 --> 00:52:22.795 and then having very severe

NOTE Confidence: 0.941669352

00:52:22.795 --> 00:52:24.595 consequences if they do not,

NOTE Confidence: 0.941669352

00:52:24.600 --> 00:52:27.078 I think makes a lot of sense.

NOTE Confidence: 0.941669352

00:52:27.080 --> 00:52:30.560 But definitely having like very explicit

NOTE Confidence: 0.941669352

00:52:30.560 --> 00:52:33.262 policies as to how you want things

NOTE Confidence: 0.941669352

00:52:33.262 --> 00:52:36.200 cited and how you want transparency

NOTE Confidence: 0.941669352

00:52:36.200 --> 00:52:38.372 to be specified in anything that

NOTE Confidence: 0.941669352

00:52:38.372 --> 00:52:41.159 you submit is is really important.

NOTE Confidence: 0.911572608571429

00:52:43.160 --> 00:52:45.092 Another example that I can think

NOTE Confidence: 0.911572608571429

00:52:45.092 --> 00:52:47.886 of is when I was shadowing a few

NOTE Confidence: 0.911572608571429

00:52:47.886 --> 00:52:50.320 probably months ago now in the CCU

NOTE Confidence: 0.911572608571429

00:52:50.320 --> 00:52:51.783 I was following along and as AI

NOTE Confidence: 0.911572608571429

00:52:51.783 --> 00:52:53.455 was a first year medical student I

NOTE Confidence: 0.911572608571429

00:52:53.455 --> 00:52:55.199 think at the time and really didn't

NOTE Confidence: 0.911572608571429

00:52:55.199 --> 00:52:56.831 have that much of A grasp and had

NOTE Confidence: 0.911572608571429

00:52:56.831 --> 00:52:58.955 a million questions and asked the

NOTE Confidence: 0.911572608571429

00:52:58.955 --> 00:53:01.394 attending that I was following if it's

NOTE Confidence: 0.911572608571429

00:53:01.394 --> 00:53:03.680 OK to be on my phone a little bit

NOTE Confidence: 0.911572608571429

00:53:03.680 --> 00:53:05.635 in the background Googling things.

NOTE Confidence: 0.911572608571429

00:53:05.640 --> 00:53:06.786 Well I asked.

NOTE Confidence: 0.911572608571429

00:53:06.786 --> 00:53:09.078 I admitted to using ChatGPT and

NOTE Confidence: 0.911572608571429

00:53:09.080 --> 00:53:11.510 was actually he was very interested

NOTE Confidence: 0.911572608571429

00:53:11.510 --> 00:53:13.924 and enthusiastic and read a lot of

NOTE Confidence: 0.911572608571429

00:53:13.924 --> 00:53:15.895 the responses and was very happy

NOTE Confidence: 0.911572608571429

00:53:15.895 --> 00:53:17.315 that I was using it.

NOTE Confidence: 0.911572608571429

00:53:17.320 --> 00:53:19.340 And I I think it for a lot of those

NOTE Confidence: 0.911572608571429

00:53:19.402 --> 00:53:21.520 little questions that come up it

NOTE Confidence: 0.911572608571429

00:53:21.520 --> 00:53:23.720 can be really helpful augmenting

NOTE Confidence: 0.911572608571429

00:53:23.720 --> 00:53:26.435 again recognizing not as a source

NOTE Confidence: 0.911572608571429

00:53:26.435 --> 00:53:27.800 of truth etcetera.

NOTE Confidence: 0.911572608571429

00:53:27.800 --> 00:53:29.220 But that kind of transparency

NOTE Confidence: 0.911572608571429

00:53:29.220 --> 00:53:30.640 I think can be helpful,

NOTE Confidence: 0.911572608571429

00:53:30.640 --> 00:53:34.021 but is definitely a nervous step to

NOTE Confidence: 0.911572608571429

00:53:34.021 --> 00:53:37.175 admit to your professor or attending.

NOTE Confidence: 0.911572608571429

00:53:37.175 --> 00:53:39.665 But maybe that's a tool you're

NOTE Confidence: 0.911572608571429

00:53:39.665 --> 00:53:41.125 using and being cognizant of how

NOTE Confidence: 0.911572608571429

00:53:41.125 --> 00:53:42.640 you're using it is very important.

NOTE Confidence: 0.900413566875

00:53:43.280 --> 00:53:45.592 But that being said, like on the PhD

NOTE Confidence: 0.900413566875

00:53:45.592 --> 00:53:48.075 side of what I'm doing here at Yale,

NOTE Confidence: 0.900413566875

00:53:48.080 --> 00:53:51.264 so much of that type of learning is

NOTE Confidence: 0.900413566875

00:53:51.264 --> 00:53:54.406 harnessing the tools that we have to

NOTE Confidence: 0.900413566875

00:53:54.406 --> 00:53:56.671 produce the best research possible.

NOTE Confidence: 0.900413566875

00:53:56.680 --> 00:53:58.600 And then when we write out our methods,

NOTE Confidence: 0.900413566875

00:53:58.600 --> 00:54:00.075 you know, we talk about

NOTE Confidence: 0.900413566875

00:54:00.075 --> 00:54:01.880 what tools we used and why.

NOTE Confidence: 0.900413566875

00:54:01.880 --> 00:54:05.000 And I think that this,

NOTE Confidence: 0.900413566875

00:54:05.000 --> 00:54:06.980 the applications of ChatGPT into

NOTE Confidence: 0.900413566875

00:54:06.980 --> 00:54:09.524 medicine is almost pushing us to

NOTE Confidence: 0.900413566875

00:54:09.524 --> 00:54:13.472 be more scientific in the way that

NOTE Confidence: 0.900413566875

00:54:13.472 --> 00:54:16.284 we are thinking because we have

NOTE Confidence: 0.900413566875

00:54:16.284 --> 00:54:18.810 to be using the methods correctly

NOTE Confidence: 0.900413566875

00:54:18.885 --> 00:54:21.380 essentially in order to produce

NOTE Confidence: 0.900413566875

00:54:21.380 --> 00:54:23.000 the appropriate output. I

NOTE Confidence: 0.758194485

00:54:23.120 --> 00:54:25.480 think that's a great, sorry.

NOTE Confidence: 0.934259967333333

00:54:25.480 --> 00:54:27.293 I think that's a great segue into

NOTE Confidence: 0.934259967333333

00:54:27.293 --> 00:54:29.342 to highlight one of the questions in

NOTE Confidence: 0.934259967333333

00:54:29.342 --> 00:54:30.867 the chat about mitigating systemic

NOTE Confidence: 0.934259967333333

00:54:30.867 --> 00:54:32.627 bias where ultimately at the end of

NOTE Confidence: 0.934259967333333

00:54:32.627 --> 00:54:35.120 the day we may not be able to right.

NOTE Confidence: 0.934259967333333

00:54:35.120 --> 00:54:37.595 This is essentially something running

NOTE Confidence: 0.934259967333333

00:54:37.595 --> 00:54:39.575 on the statistical collective

NOTE Confidence: 0.934259967333333

00:54:39.575 --> 00:54:41.619 intelligence of the Internet and

NOTE Confidence: 0.934259967333333

00:54:41.619 --> 00:54:43.474 related sources and then generating

NOTE Confidence: 0.934259967333333

00:54:43.474 --> 00:54:46.280 what that likely is going to say.

NOTE Confidence: 0.934259967333333

00:54:46.280 --> 00:54:47.680 It's going to be biased.

NOTE Confidence: 0.934259967333333

00:54:47.680 --> 00:54:50.155 We can't avoid it, but we can recognize it.

NOTE Confidence: 0.934259967333333

00:54:50.160 --> 00:54:51.868 We can identify it.

NOTE Confidence: 0.934259967333333

00:54:51.868 --> 00:54:54.430 We can work with scientific rigor

NOTE Confidence: 0.934259967333333

00:54:54.511 --> 00:54:55.720 to mitigate it.

NOTE Confidence: 0.934259967333333

00:54:55.720 --> 00:54:59.155 And if we are transparent and

NOTE Confidence: 0.934259967333333

00:54:59.155 --> 00:55:00.880 we do the best we can,

NOTE Confidence: 0.934259967333333

00:55:00.880 --> 00:55:02.640 then we are doing the best we can.

NOTE Confidence: 0.621727015714286

00:55:04.880 --> 00:55:07.274 And I think to an Elizabeth's point,

NOTE Confidence: 0.621727015714286

00:55:07.280 --> 00:55:09.400 you know, this is what leadership looks like.

NOTE Confidence: 0.88417135

00:55:11.040 --> 00:55:12.391 The last thing I don't want to

NOTE Confidence: 0.88417135

00:55:12.391 --> 00:55:13.879 run right up to the last minute,

NOTE Confidence: 0.88417135

00:55:13.880 --> 00:55:15.320 but I do think it's really

NOTE Confidence: 0.88417135

00:55:15.320 --> 00:55:16.800 important to address the chat

NOTE Confidence: 0.88417135

00:55:16.800 --> 00:55:18.880 comment about HIPAA compliance.

NOTE Confidence: 0.88417135

00:55:18.880 --> 00:55:20.287 And that is another thing that really

NOTE Confidence: 0.88417135

00:55:20.287 --> 00:55:21.880 needs to be emphasized to students,

NOTE Confidence: 0.88417135

00:55:21.880 --> 00:55:24.070 to residents, to everyone in the

NOTE Confidence: 0.88417135

00:55:24.070 --> 00:55:26.320 hospital is that with the public

NOTE Confidence: 0.88417135

00:55:26.320 --> 00:55:28.110 available versions of Chat BT

NOTE Confidence: 0.88417135

00:55:28.110 --> 00:55:30.479 that you use through a browser,

NOTE Confidence: 0.88417135

00:55:30.480 --> 00:55:32.460 no patient like private health

NOTE Confidence: 0.88417135

00:55:32.460 --> 00:55:34.440 information should ever go into

NOTE Confidence: 0.88417135

00:55:34.512 --> 00:55:36.892 those models because open AI for

NOTE Confidence: 0.88417135

00:55:36.892 --> 00:55:38.504 those public models specifically

NOTE Confidence: 0.88417135

00:55:38.504 --> 00:55:40.639 that are on the web browser,

NOTE Confidence: 0.88417135

00:55:40.640 --> 00:55:42.590 they do sometimes use what you

NOTE Confidence: 0.88417135

00:55:42.590 --> 00:55:44.600 input to further improve the models.

NOTE Confidence: 0.88417135

00:55:44.600 --> 00:55:46.975 So there is definitely risk

NOTE Confidence: 0.88417135

00:55:46.975 --> 00:55:48.875 of like Phi leakage.

NOTE Confidence: 0.88417135

00:55:48.880 --> 00:55:50.390 That's why the hospital has

NOTE Confidence: 0.88417135

00:55:50.390 --> 00:55:51.598 blocked those public models.

NOTE Confidence: 0.88417135

00:55:51.600 --> 00:55:53.588 And I think it's important for the

NOTE Confidence: 0.88417135

00:55:53.588 --> 00:55:55.599 hospital to explain why that's happening.

NOTE Confidence: 0.88417135

00:55:55.600 --> 00:55:57.896 And I also think that there can be

NOTE Confidence: 0.88417135

00:55:57.896 --> 00:55:59.598 future solutions as David mentioned,

NOTE Confidence: 0.88417135

00:55:59.600 --> 00:56:02.270 for research purposes right now there

NOTE Confidence: 0.88417135

00:56:02.270 --> 00:56:04.488 is HIPAA compliant workarounds that

NOTE Confidence: 0.88417135

00:56:04.488 --> 00:56:06.678 never embed Phi into these models.

NOTE Confidence: 0.88417135

00:56:06.680 --> 00:56:08.878 And I think there could be interactive

NOTE Confidence: 0.88417135

00:56:08.880 --> 00:56:11.875 like mobile uses as well in the future,

NOTE Confidence: 0.88417135

00:56:11.875 --> 00:56:13.498 but we don't have those yet and it's

NOTE Confidence: 0.88417135

00:56:13.498 --> 00:56:14.626 important that people understand

NOTE Confidence: 0.88417135

00:56:14.626 --> 00:56:16.036 the limitations in the meantime.

NOTE Confidence: 0.962881266666667

00:56:17.400 --> 00:56:19.158 So I think on that note,

NOTE Confidence: 0.962881266666667

00:56:19.160 --> 00:56:20.200 it's about time to wrap.

NOTE Confidence: 0.962881266666667

00:56:20.200 --> 00:56:21.496 Let's give you like a minute

NOTE Confidence: 0.962881266666667

00:56:21.496 --> 00:56:22.597 or two before whatever you

NOTE Confidence: 0.962881266666667

00:56:22.597 --> 00:56:23.755 have to do in the afternoon.

NOTE Confidence: 0.962881266666667

00:56:23.760 --> 00:56:26.052 Thank you for joining us to

NOTE Confidence: 0.962881266666667

00:56:26.052 --> 00:56:27.563 talk more about ChatGPT.

NOTE Confidence: 0.962881266666667

00:56:27.563 --> 00:56:29.741 This is going to be an

NOTE Confidence: 0.962881266666667

00:56:29.741 --> 00:56:31.240 ongoing discussion for many,

NOTE Confidence: 0.962881266666667

00:56:31.240 --> 00:56:33.956 many years as we're in medical education.

NOTE Confidence: 0.962881266666667

00:56:33.960 --> 00:56:35.838 So feel free to reach out.

NOTE Confidence: 0.962881266666667

00:56:35.840 --> 00:56:38.360 Thanks again and have a great afternoon.

NOTE Confidence: 0.962881266666667

00:56:38.360 --> 00:56:39.600 This has been MEDG.