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Transcript

Speaker 1

It is 1 o'clock now and I'd like to start the process of the first session of our seminar, further experiments in artificial intelligence. You can see some of my experiments on the right side there. It's A mathematical symbol. This one I can't really tell you what it is. It just came out very attractive. And I worked with the Adobe Creative Suite to try to isolate it so I could put it in the slide. So that happens a lot. As I like to do, let's see if I can start this. I always like to put in a cartoon of some sort. as we begin these processes. This one was from some time ago, but it's a congressman speaking. We need guardrails for this technology while it's still in its infancy. And it's artificial intelligence when they first came out with it, and it was in a baby crib. And notice how it's busted out of the baby crib. And it's a, you know, a gigendo. And really, this is what was a good start for me because regardless of what I do or what you all do, artificial intelligence is here. I think it's beneficial that we all start studying this so that we're active consumers. One of the things I wanted to do, these two guys were, I guess, one of my role models. They were the winners of a Nobel Prize last year. The new awards are coming out as we speak. But these were the two gentlemen that won Nobel Prizes last year, Demis Hassabis. Won the prize Nobel Prize in Chemistry. For Alpha Fold, the product that predicts protein structure. So the ability to. Find new materials for medicines. Or structural materials. He is now the. CEO of Google's DeepMind. He is, I believe, in the UK. Most of these gentlemen are Brits, if I remember correctly. Very important. His academic work was in cognitive neuroscience. That's going to be part of the instruction that we have today. Demis Hassabis, Jeffrey Hinton won the Nobel Prize in physics for the concept of back propagation in AI training. So not only would you deliver instruction to the AI, but when the AI gives you information, you feed information back up the chain to the AI as part of its learning. It's very much a human capability as humans are corrected in their understanding. It's integrated into their cognitive structure. Jeffrey Hinton is at the University of Toronto and his field of study is cognitive psychology. We'll get to that in a second. Just from very quick information about me, I was, my professional work was with the Department of Defense, US Peace Corps headquarters, and I've done adjunct professor work for Boston University and the University of Maryland. My education, this is, I

think, very important for the understanding of AI is language experience. I've been, I've spoken German, I've spoken Japanese, and I've spoken American Sign Language. I don't do it very well now, but that structure of Mental speaking of another language has proven advantageous to learning about AI. Our previous previous AI instruction at Ollie. It was these four. And we I'm having I am. Capturing this material and putting it in. the AI in a website and I'm going to try to go through this. I'll probably screw up here a little bit there. Here is the the website that I'm putting together and what you will notice this will change as we go along. There are seminar materials here. Here are past materials. If you want materials on Microsoft Copilot, you pull it down and here's the the session plus the materials. And then if you go to topics, here are the seminar materials. Is this large enough, Maureen? I'll make it larger.

Speaker 2

Yeah, that's good.

Speaker 1

You click here. And these are the materials that we will work with today. And the materials, the slides, we're going to look at three. And now I'm going to try to get back. There, we're there, right? These are, here's my biases. It's pretty important to understand my biases as we go through this. I'm overly curious. I'll end up going down rabbit hole very quickly. Maureen will stop me when I do. I'm overly tech oriented. I make quantum leaps of logic. And so please use the chat. material chat box to ask questions as we go uh we I am biased because we have the high speed oh Maureen if you could um and you have already pinned me uh or uh spotlighted me we have high speed spectrum internet So I am biased. My experiences with the Internet can be different because we have this very high speed stuff. I am using an Apple computer. That's what I develop all these materials with. Well, that will be. And what we just discovered is most of the people use Windows. So I will experiment with that. I do have a Windows computer. I am pessimism. Pessimism. Averse. Let's see if I can go back one. I'm sorry, pessimism averse. Pessimism averse. I always try to find the sunny side up. And I have a bias towards print. I've always had that bias. So it's a bias towards print, and you can see my materials are like that. This is something I've used for quite some time, is the hierarchy of adult skill acquisition. All of the training sessions that I've done in the past are oriented up here, just making people aware of the technology. What I would like to do is start focusing on this level, level 2 and level 3 regular use. These are the skills where I'm using AI right now. Document summarization, written composition, finding the right word, proposal format generation, I use it a lot for marketing education, which we're going to do today. Computer programming is what we'll deal with later in sessions three and four. Just some conceptual ideas in the way that AI has developed. Two

years ago, when we started doing these sessions, we had natural language processor front end. And there was one model, one AI model in the background, a large language model, and it mostly responded in text. What had? And you dealt with the natural language processing by typing. Nowadays, you can speak and type both. There's some very interesting stuff happening with speech recognition. And there are the ability to respond in multiple language. There are some graphic Composition models, which we're going to do today, and there's computer coding in these functions now. So we've gone from one model in the background after the language is processed to multiple models in the background. The reason that this is all possible, this is I've gone through this in the past, but I want to emphasize this again. This AI is possible because of the increases in capabilities of the technology. So this is 1971, some of the processors. This is floating point operations per second. So this is addition, subtraction, multiplication, division, some fairly advanced math in sines and cosines. So it did 100,000 floating point operations per second. It had 2,500 transistors to 2023. These are 24 billion processors. If you bought a phone recently, it has 24 billion processors or transistors in it. and it can do 1 billion. Is this 1 billion? Maybe this is trillion floating point operations per second. you took uh so that's the processors this is the transmission speed that we are using from night from the 1870s Telegraph the best uh teletype operators Telegraph operators could do 100 words a minute Teletypes from the 1930s can do 150 bits per section, per second, 1985, 300. Now, Maureen and I have a gigabit, so add another zero on this in 2025. So notice it's orders of magnitude increases. The software lines of code in Windows, 1993, software lines of code, 5, orders of magnitude, 2015. So 10 years later now, it's, I don't know what it is, 80. million software lines of code in Windows 10. This is the number of parameters, and we're going to cover this in just a second in the AI by year. Right now, we're going to be mostly focusing probably right here, trillions of parameters within Rock, which is XAI's. A artificial intelligence trillions. Of parameters and the parameters are this. Remember tokenization, they've turned the Library of Congress. The University of Michigan Library. The British Library. Into this. code. And it is the relationship of the words to each other from a billion book library that they've they've learned from. It's the relationship of the words to each other. This is the parameter. This is one parameter. It's based upon the human neuron is there's basic inputs to this word one next to word three. If word one appears so much, it's given a greater weight. The bias here is if there are two of the three then I'll send the activation function not very important this part this is why Nvidia is worth 4 trillion dollars is it can turn this mathematics into an speed of light computation that's what Nvidia does that they are more valuable than Apple now and what they do is they can do these functions attach here's the X it computes this function at the speed of light I I couldn't figure this out but And then when we talk about a trillion, there's a trillion here. We've got 3 or 4. Put that up to a trillion. And that's how the intelligence works. What can the biases of

the AI's what to watch for? You will see them. Individual mindset, cultural mindset. We, one of the things that we're discovering, we being the AI community, if you are trained on English language, you have a liberal bias. The more English they have used in their training materials, in their corpus of training, that tends to skew the attitude of the AI to liberal perspectives. Sex and gender biases. We may see this in the picture. Race or ethnicity biases, caste. as India is the largest country in the world by population. Cast is still a huge bias training corpus. I just talked about that. The corpus of the materials that are used. the epistemology of ignorance. which basically means the study of why people are ignorant or don't. And one of the Things that people choose to be ignorant. That's the one that got me. Plus anthropic limitations. What are the limitations of we humans to conceive of things? These are some of the biases. Here are the potential risks. These are mostly for the AI companies. I'm going to go quickly through these legal risks, reputational, contextual risks. Circumstantial risk. Values alignment. We're going to see this terribly much now. Computational risk. We're going to talk about compute. How much processing does it take? Next week's cartoon is already on the slide. What is the cost of computation of the training of corpus in court in court oration. These are the professions that are going to be affected office support who has a office support person anymore. That was one thing that I noticed when computers were introduced is the number of secretaries went down. Here, these are the vocabulary words that we will have. And I'll show this on each preparations. Each seminar sessions, I'm going to cover these. We all probably know what a prompt is. That's the request that you make. to the AIs. We're going to cover that extensively today. The inference comes from statistical, statistical work. What you may, when you look at statistics, you make an inference about the statistics that you're given. That's the information that you return, the judgment call that you make. The inference is the answer that the AI gives you. So those who are going to deal with LLMs, large language module, multimodal language model, and this is a new one that's coming out, is a small language model that will fit in a watch that you know that they'll be starting to put small language model on things like watches, multimodal. Remember that it was simply language in the beginning. Now it's language, speech, imagery. a whole bunch. a natural language processing. This will be in session two that I deal with. What's the difference between providing a prompt to an AI verbally versus typing it in? Artificial general intelligence has a meaning that The artificial intelligence is smarter than all humans in all subjects. My thoughts now is AI smarter than me in most subjects. I ask it questions because I want to learn from it. It's smarter than me in mathematics. It's smarter than me in philosophy. It's smarter than me now. But they're thinking that they'll come up. Even more intelligent. Rag is what you we see all the time now. You I'll try to bring it to people's attention. It's retrieval. Augmented generation. We will discuss this multiple times today. The AI. interprets your prompt, interprets your question, and then it goes out to the internet, retrieves current

information, synthesizes the information, and then responds to you. That was two years ago. It would basically make a quick inference from its knowledge that had an end date, And then it would respond to you now how it goes out and gets current information. Tokens are the word fragment. If you think about the word manufacturing, the core of that is fact, F-A-C-T. There's factory, manufacture. That the fact is the token. We'll discuss a lot these hallucinations. The problem being humans in our interaction with them hallucinate a lot. Algorithms we'll talk about a lot. corpus that's the material the core training the that is the big expense of categorizing not only Library British Library Library of Commerce University of Michigan they're starting to train on the complete uh Twitter the complete Facebook the complete YouTube API. I hope to get to this application programming interface is this is the I'll go into it later, but we'll discuss that numerous times during the other session models. We're going to cover this today. Frontier models are the ones that are occurring in open AI's laboratories right now that are concerning, that can make chemical combinations that are dangerous to human beings. Values, alignment. We're going to cover workflow. which you should be doing, which I do whenever I just try to figure out how AI can be used in a task. Break down the task into its entire list of components and where does AI fit in. Coding is writing computer code. Back propagation is when you hit the, oh, this is a good button. It feeds back information bias. Oh, my gosh. Social bias versus technical bias. There can be confusion at this. Cognitive load. We are going to be learning some stuff that our brains become overwhelmed. We become cognitively overloaded. processors can have that can happen to processors as well. I've discovered this one RLHF is extraordinarily important. Reinforcement learning from human feedback. So Google gets this new AI that they've loaded the British Library to. They then send it to put in front of people in Kenya, South Africa, where wages are low, and then they have people looking at and prompt, how does the AI infer back to them? Is this a safe response? Humans are doing that. They're paying them 25 cents an hour in Kenya or a dollar an hour in Kenya to put all of these tens of thousands of questions in front of them. We're going to encounter this. You've already encountered it. Enthusiastic affirmation. What is the AI's response? What is it aligned to do? Enthusiastically affirm your question. Oh, I'm glad you asked that question. Oh, that's great. This one I'm going to skip, but that's what all the billionaires at OpenAI and Google effective altruism. These are very important. We'll go into them later. Context, and this is where I'm paying for some of these now. The amount of information that they can deal with, the context or their length of attention or their persistent memory gets much bigger. hyperscale. This is we're reading about Nvidia selling billions and trillions of dollars worth of processors so that Elon Musk can hyperscale their computer factory. Here's one that we I sent the article about these 2 here. Doomer. Boomer. Do you believe that AI is going to end the human beings as we know it? You're a doomer. Do you believe AI is going to cure cancer? You're a boomer. The boomer doomer dichotomy. Probability of doom. If you work

in down in the peninsula in the Bay Area, somebody walks in the office and says, oh, what's the P doom on there? What is the probability of doom scenario? When they release a new model of AI, so when we go from ChatGPT 3.4 to 4.0, what is the probability that some guy in Moldova can create an atomic uranium feature from it artifact we're going to deal with mark down we're going to deal with it's the response the inference that AI gives and you want to copy it to another program like word processing, it will do it in markdown. And you have to know how to deal with markdown. If you're dealing with advanced mathematics symbols, you have to use LaTeX. And this is one I hope by the end of our session that we can deal with it, where we can ask an AI to compose a musical composition and put it in musical notation. What does it take to correctly render the music notation? It so happens that there's a thing called Lily Pond that will display music notation appropriately, hopefully, and some apps will play the music. So what I want to do is see if we can get AI to compose some notation and then have another program play it. Model collapse we'll deal with. Misinformation versus disinformation. Oh, my goodness, this is huge. Emergent behavior. What unexpected behavior is arising as Daniel Amodi creates his Claude version four What's the new behavior that will come from that that we aren't thinking about? So what is the emergent behavior? These are terms that are used in these offices in the Bay Area. Augmentation. The big question now is, will AI replace humans or will it augment? humans one thing I saw that the response I just heard is that is correct it is AI is replacing new employees you know the beginning employee in a you know the novice employee that person is not getting the job and it is augment 80% of current employees use AI. They're producing SLOP e-mail and SLOP e-mail responses. Vector database we'll get into these are the products we're going to deal with. Today we're going to deal with Meta, Grok, Canva, hopefully we'll see it. We'll see gamma AI responses and we will deal with these over the course of the seminar. It is, I'm paying \$20 a month to get the full range of Google Gemini and I'm paying \$20 a month now to anthropic to get the full capabilities of Claude AI. I'm paying \$135, \$129 a year for Microsoft Copilot plus their full suite of product. We'll see a lot of these today. So we're going to look now at a presentation that I made using Gamma. Maybe at the end of the session, I'll be able to show the exact same material that Canva produced. This is a PowerPoint presentation that Gamma produced. I asked Claude to produce a full discussion of the topic of theory of mind. What is the theory of mind as applicable to AI? And I asked Canva and Gamma to produce these. Gamma came up the last, the best. Here is what Gamma produced. This is the slides on understanding other's thoughts and mind. Here's the overview. Theory of mind is the method by which humans Try to understand what the other person is thinking. What are the characteristics that the other person is implementing, their expression, their body language, their tone of voice, their speech? What is being used that the other human beings see that has me or the other human being inferring what that person's state of mind is. Theory of mind is essential for

empathy. People that are that have are artistic may have some limitations on their ability to empathize, their ability to make judgment calls based upon behavioral characteristics. It used to be called folk psychology, but it is now becoming very important in human cognition. Remember those two guys we thought talked about? Demis Hassabis, Jeffrey Hinton. What was their fields of study? Cognitive science. Development in children. They have shown that it begins at about age three or four. What are, how do you predict other people's intentions? We do it. How do you do it? This is what these people are studying. Cognitive scientists. Neuroscientists are making big money in Palo Alto, in Mountain View. They're making big bucks. What they found is the medial prefrontal cortex of the brain is what puts this together, what makes the human capable of these instantaneous judgments or these instantaneous inferences, the medial prefrontal cortex and the temporal parietal junction function. There are now MRIs, functional MRIs, fMRIs, they're called, that show the transmission of electronic impulses in the brain. That's where this is coming from. These fMRI, social cues. Another way of saying it. AI. This part, we, this is. my current level of work. What does the AI observe in human behavior to make inferences? AI is now doing, is processing the human speech more than just translating speech to text. It's interpreting volume. It's interpreting tone of voice. It interpreting the pace of the speech to make judgments about the person that is speaking to it. Philosophical question, are we comfortable with this? And the other way around. So what is the AI doing to interpret the state of mind of the human? What's the other way around? What is the human doing? What are they observing in the AI that makes the human interpret consciousness by the human? You've seen the articles in the paper about human beings having confidants. Up to a third of people have an AI confidant. How is that-- how are the AI companies putting behavior in the AIs that trick the humans into believing that they have consciousness? Are we ready for it? A third of human beings are doing this in the modern world. The takeaway. Theory of mind is important. Neuroscience insights. AI and mind reading mimicry. Human interpretation of the AI. Let's take a short break here. We're going to put together some prompts. Do we want to just pause, Maureen, for a few seconds? Let's see if I can do this. Hey, Siri, give us a notice in five minutes, please. You already have two other events that overlap with this. Should I schedule it anyway? Yes, please. I didn't do it right. Oh. Oh, so now. Here he has just had the ability to put in. Hey, hey, Google. Put a timer in for four minutes. So we got a four minute.

Speaker 2

Four minute break, so let them have a break.

Speaker 1

I should have some music in the background. Oh, I'm going to stop share. Oh, there, that shut it up. I'm going to change my video. And I'm going to share the screen.

Speaker 3

Desktop view. James, I didn't hear a word. in your list of vernacular in the beginning, the word being singularity.

Speaker 1

Yes, I'll write that down. That is the frontier models. And the article that I sent out from the New York Times. This Sunday's New York Times talks about that, the singularity, but I'm going to write that down, singularity. And they seem to think that the singularity will be when AIs can write the code to update themselves and evaluate their behaviors for programming improvements so that it can iteratively improve upon itself without human intervention. That's Kind of frightening. And it's. It's almost there. Let's not scare people. Let's see if I can topic.

Speaker 3

I notice you used to work for DARPA. I wouldn't be surprised if DARPA was working on that very capability.

Speaker 1

Oh, yes. Oh, yes. I worked with DARPA and it was ARPA at the time. Actually, it was when my agency at the Department of Defense was working with ARPA, they changed back to DARPA, which was in the late 1990s. Hey, Google, stop. And yes, autonomous weapons, autonomous drones. That's one of my dreams is to see if I can hook. I bought a drone. I haven't used it as much as I like, but can I hook the drone up to an AI to have it? maneuver around Ashland, which you can see on the screen right now. I'm going to try to make it bigger. This I have designs I put into the city of Ashland.

Speaker 2

Are you restarting your session?

Speaker 1

Yes. Restarting the session, the alarm went off and I'll start with something slow. But I petitioned the city for engineering drawings of what they're doing on North Mountain. And these are the engineering designs you can see on the screen there. And I asked, I put the designs in to an AI and said, please create an image from these engineering designs. And I hope to do that again here soon. And this was the design that it came up with. And I believe

this is the curve that goes down Mountain to Hersey. Hersey Street is down there. But this notice they've got bike lanes now. And this just passed the city council. new work. It's her seat of freeway is this year. Her seat on Main Street is next is 2007. But now I'm gonna go back to the presentation. You should see the a science behind effective prompts. This next slide, I think you should print it out and post it next to your computer if you're planning to use AI a lot. I'll try to dig up where I got this, but the depths that you have to put in an AI is the role that you would like the AI to take. I am crazy and I try to swage the AI's ego and say, you are an expert in whatever. And then I say, what is the context of my question? I You, I would say to the AI, you are an expert in hematological pathology, and I have an exam next week in that course that I'm taking at the university in pathology expertise. It's an expert contact. I have a test prompt. What is the, give an example. Tell it how you would like to respond in a cordial environment of five bullets, the five bullet points. This is the way that you can construct or should be constructing AIs. And what I'd like to do now, if I can, without any mistakes. is to show you 3 AIs. I pay for the full adobe suite and Firefly is their generative one. You can use it for a certain amount of pictures created And then you can pay by the picture. Meta AI is from Facebook, Instagram. Guess what they're using to train their AIs at Meta? They're paying the AI neurology experts billions of dollars and as is Elon Musk. The old Twitter company. So these are the ones we're going to use right now. This is I'm going to use. Images or I'm going to use. Adobe Firefly. With prompts. that you have available to you. So I'm okay. I brought this up. I just clicked on that image and I brought up. This is available to you. I believe this is an instructional We're dealing multiple instructional capability, characteristics now. The structure of the prompt and math and point of view, art to art, point of view in art. Well, let's go down to a, there's a couple pages. Let's deal with radial, I'm going to I haven't done this one yet. I want to take that copy. I right click to copy it. So I've copied this prompt. You'll be able to copy the prompt. And then I'm going to go to Adobe Firefly. These this is the ones that I've used so far. Notice down at the bottom. Notice down at the bottom is the area of the prompt. I'm going to click in that box. You hopefully can see the little and I'm going to right click. Notice the two pastes. Paste. and paste and match the style of the document or the location where I'm pasting it. That's the one I'm going to choose paste and match the style. So it matched the style of this particular editor tour. We'll discuss that at future lessons. and I'll do just very quickly render a futuristic radial perspective chart with central hub and concentric rings. I think this was the one that I did before. But I am going to generate this just right. This is within adobe Firefly. and this is what it particularly created from my prompt, I'm going to go up here in Adobe Firefly, and I'm going to change the model that it uses to Imagen, which is Google. and I'm gonna change the aspect ratio to wide screen radio perspective. I'm gonna change. I'm gonna edit this cloud structure. So I've edited the prompt. which I'm encouraging you to do. Notice how it's changed to wide screen. It takes it a few seconds,

but this, oh, look at that's interesting. I'm not sure that's what I wanted, but I kind of like it. Let's now go back to my perspective, let's take an isometric projection, copy that, go back to Firefly. I'm going to select all this, delete it, and then put in my paste with match style. And let's choose a different model, I think, flux. And let's choose square image. Notice how the structure that comes back. Oh. That's interesting. I like that. Stone monolith. L-L-I-T-H. Monolith, is it? Monolith. So here, not only would I be teaching the prompt, the model, I would be teaching architecture or artwork. Architecture, we could be discussing the various parts. I can download the structure. I'm going to just generate this one again, square, using Flux. I think this is different, right? And I changed it to monolith. So notice that it puts in, I'm going to change to shaded, change this one, color, ink. Shaded water color. Wash. With. Ink measurement line. And let's change it back to Firefly Ultra. Which is their highest end one. It will probably take. A longer period of time to. Generate. So. I changed the monolith. I changed the add watercolor wash and used color inks. Let me download that and it takes a second to download. This is available to you. I show it. Oh, we got a half hour yet. So I, right now, you can see I am in a browser. I have loaded the website. Can you see it up here? Firefly.adobe.com. you have to log in I'm assuming you're all going to be able to deal with that you have to log in you only get a certain amount up here notice because I'm paying I have 300 credits 3,000 credits I think you have like 200 credits if you're on the free plan. Plus you can buy credit. Oh, I shouldn't have started that one. So there you go. If you work in a shop, you know, a design shop, you'll pay the money for this. Now I'm going to jump out of the browser now back to the presentation. This was trying to use perspective. I will show you where to get this information for your use. Let me see if I can go to the next one. This one I am planning to use again my prompts that are partially generated through AI to create prompts for specific business scenarios. So let's I'm going to click on this to go into the browser again. I believe this time I'm going to use. What's the one I'm going to use? I'm going to use. Oh, I'm going to use here meta. Which one do we want to choose? Any preferences? I'll make this a little bigger. Any business? Here we go. Let's copy this one. I'm going to copy it. And then I'm going to-- let's go to rock. This is Elon Musk's. I hate to admit it, but it's one of the better of the AI's. So I'm going to make a mistake and hit paste. Oh, and it does, and it entered correctly here. So I'm going to read it. act as an entrepreneur provide a comprehensive outline for a business plan for a AI training Institute you can put in whatever you want include sections for market analysis marketing plan. financial projections. I did not tell it how to respond. So let's just see what happens. Brock is thinking. Notice it is retrieving information. Rag R. A. G. retrieval, augmented generation. So it's thinking about the response now. This is it going out, retrieving and generating. This is its in inferences. Oh, my goodness, this is going to put together a plan that I can take to the bank. OMG, it's actually laying out the plan for me, complete with graphics. Oh, here's the market analysis. And Bill. OMG. Let's see if I can download this

into something. Oh, I'm glad I didn't test this beforehand. Some things to notice as I've gone to the bottom. Let's see if I can make it larger. I'll go to the bottom here. Notice items on lot of information here. Most important notice down here. Remember in Firefly how I could change the model for the different graphics. I can change the model for the text based inference that it provides. Auto, I think what it did was expert. Super grok, you gotta pay. And that's one thing I'm not gonna, I'm not gonna give Elon more money. It went out It retrieved 29 web pages and generated a response from those pages. Retrieval, augmented generation. For hearing challenge, you could have it read. You could start a thread of conversation. This is what I'm going to try to do. Oh, oh, this is the one I wanted to. Notice all of these responses here. And. I'll try this next. This one. Over here. I could talk with it. This is an issue that I'm dealing with. I am very much a text typing type person. I fully understand that other people are very much audio oral oriented. So you can speak your prompt. If you can compose it with speech, good for you. The thing to remember is the prompt you Mean what you say, or do you say what you mean? Do you mean what you say, or do you say what you mean? We'll get into that next week. But I'm gonna go here. Export to Pdf. Let's see what happens if I export this to Pdf. Where I think it what it goes to is up here. It takes it a while. No. Oh, this is important as well. this was all next week. Oh, there it just, did you see it? I went real fast. It took it a few seconds to generate the response in a PDF. Here's a PDF of it.

Speaker 2

You have a couple of questions.

Speaker 1

Yeah.

Speaker 2

How would you fact check that business plan?

Speaker 1

As well, this extending thinking in AI terms, I could submit this PDF business plan to from Grok to Google Gemini. I could submit it to Anthropic's Claude and have it check the plan. The true response is, you've got to read it and see and make evaluations as a human being. Where do I have to check this? If you use any kind of-- AI for legal oriented information, you absolutely must check your work as a human being. If there are legal references in any of the things you do, you must check your work. I'm going to try to close this one here. Let's see.

Speaker 2

Notice that the formatting is terrible in that.

Speaker 1

Yeah, the formatting is terrible. the formatting is terrible in this so I would go back to this let's that was PDF they got rid of their um I'm going to copy this and then I'm going to I'm going to go over to here to this one and go to docs.google.com. This is half of the world uses this now and I'm going to right click and paste just paste directly. And most many people are going to be confused by this. This will be a huge topic of conversation that we're here. Notice all of the formatting in the document is confusing to most people. Notice the I'm gonna try to make it bigger. Is that better? Especially when you get? No, I'm gonna make it bigger. Notice. in this section, all of the formatting that is in place in the cut, I copied and pasted, and it put this formatting in. That is called markdown. That is markdown format. We will cover this repeatedly. In the mainframe era, '50s and '60s, they didn't have all of these graphic interfaces like Windows and Apple and Linux. So when they output information, they put it in a format that they would go to later for lay out, mark up. You'd have to do a markup of the text that you provided, the report that you got out of your Fortran business report in 1960 from IBM computer. It delivered this type of information that was given to the communication shop, and they marked up the report. So what did the computer scientists in their lab say? Oh, let's call it markdown. So they put it in markdown. So the communication shop would do markup. A little bit of history there. And I will show you. I want to show you now, but I'll show you later what you do with this. So back to.

Speaker 2

You have another question while you're going back. This is about Firefly. Can Firefly use the personal photos of the users if you have a TB of photos in your collection?

Speaker 1

I believe Firefly does have, I'll jump back to Firefly here. over in this area, see all of this information. Remember where I changed here? You can go back and change. Oh, here it is. You can go back add an image. You can copy an image and then have firefly adapt that image. We're talking expert use now, and then, after you've modified it, you copy it into Photoshop or illustrator, and then down here are all of the effects that you can add. Let's try putting in a materials. Can you see here? Clicked on materials. And then who do you know what galosh is? Anybody know what galosh is? Let's do a charcoal. drawing here this time. Notice how I put charcoal down here. It's using 20 credits. So I think if you're doing the free one. you'd get about 10 or 15 items a month. So notice this, I'm not too satisfied

with this. So I'm going to exit out of this one here. I'm going to, oh, I like the, what is it, layered paper effect. And I'm going to go back up. And And I'm going to choose flux. Oh, it deleted my-- oh, man. Oh, see it removed. Flux doesn't allow that. I'm going to keep it firefly. There. Oh, that's a learning experience. Layered paper. Put it down there. I'm going to change to projection of. What? Arch. Couch. Arch, ARCH. And instead of Celtic, what the kind of Celtic? What kind of? horbles. Roman. with 2 vanishing points. Notice how it's making 4 samples. Hmm. I like this one. So I'm gonna save Notice how I went to download up here. I could share it. And I like this one. I'm going to hit. Look at all of the responses. Remember the guy that won the Nobel Prize in physics because I can feed information back to Adobe's AI about things. I'm not going to do it right now. I'm going to close this. Let's take this. Copy it. Let's go to image in here. This will show you the difference between paste. Oh, it put did it correctly. they've corrected that information oh look at all the different AIs via this rocket right down here you can attach a file this is Grok Grok's creation And let's go over here to the third one that I wanted to present. And I want to paste and match style. This is meta's response. This is, oh, it looks like it's It's working. Oh, it says it's working. Let me go back here. This was, remember, this was business-oriented stuff. And I showed you a little bit about the cut and paste. This is into Microsoft Word from Brock. This is a copy into Google Docs. Now I want to deal with meta and use a different set of mathematic, different set of prompts. This I have not done as much testing to see if it works correctly. But we'll make a fool of myself. That's always fun. We're going to take mathematical, advanced mathematical forms and see if these AIs create the document. So I'm going to click on this picture. It brings up simple 3D shapes. I'm going to make it larger. And I'm going to try to make it larger. And let's see if I can't. Well, I'm going to make it a little smaller. Notice here is the shape over here. It's just a description. Imagine you're in eighth grade algebra or eighth grade geometry, ninth grade geometry. And the teacher comes in and says, we're going to learn all of these shapes in class. And we're going to get up to here. Well, I don't know what this is. A helicoid. Let me copy this formula. This is kind of, it works out a little tricky. It never risk quit. I'm gonna stop responding. I'm gonna put this in response, a style. but it only has that information. So I'm gonna say. please draw a color ink drawing of the result of this formula. Well, Let's see what we get. Bob's your uncle. Well, it looks like. It looks like this is not working so well. Let me try just refreshing this. Oh, it did. There's the arches. Remember, oh, it's. My bad. Now let's please draw a color ink drawing of the result of this. Why is it doing that? See, this is-- we're going to cover this a little bit. This equation. And then I'm going to put the paste here. Well, it's generate-- well, let's just-- oh, there it goes. There it goes. This is you were seeing the qualities of Meta dot AI. So this is the result of a color. And I don't what did the what was the shape? Does anybody remember what the shape was a Helicoid. This is what a helicoid looks like. Helicoid. I would like to know what... Let's see if we can repeat this. Copy it. Paste. Please.

And change this part of it and put in. Oh, see, this is the editor. And this is. I'll discuss this in other sessions. Notice the editor here is having lots of trouble. A photo. Real. See how it's jumping like that. I'm gonna have to start again. I'm really. This is.

Speaker 2

You have one minute.

Speaker 1

Okay, let's see if I can't do. The. Photo realistic. Let's see if it works. Well, notice how it gave me an indication. It has passed my. Well, no, that's that's interesting. You see the difference between using this one versus this one? Photorealistic. You are a design furniture designer. You got a client that is very interested in changing their design structure and they want to go in and use. So this would be an artist, not that they would take it lock, stock, and barrel, but they could use this to generate new concepts for the mine. Closing this, let's, oh, the final countdown here. Let's go back. Talks with pros.com. This is where I have the materials. Seminar materials is right here. Maureen in my previous instruction is here. But in these are the PDFs and I'll go back. And show you that these will open. And these are the slides. This is today's slide. This is the handouts. These are the products that we look like just some a past user guide. the results of the survey the long article that I sent to you but it back here if you these will open here's 100 prompts and you can download it to your computer so you could there's a press kit this would have been in my job act as a publicist, generate a short company biography, and the list take. have it generate a press kit. Let's do questions here. I'm gonna stop the share. Do we have any questions that?

Speaker 2

You're over time now. So anybody that wants to stay around for questions.

Speaker 1

The question. Yeah.

Speaker 3

I have a question and that is when it comes to, you mentioned if you really want to check the work, you could check it yourself or you could have another AI system check for accuracy and et cetera. Why don't why don't AI systems have error checking as a routine before the before outputting the the information? So you or or it could say it could prompt you with what level of accuracy do you want in the response?

Speaker 1

You can. And we'll go into this. It's an excellent question. You have to put into its context. the context of the AI. You say it beforehand. Please do not deliver inaccurate information.

Speaker 3

Okay.

Speaker 1

Or pause. reflect 4 or 5 min on this before you give it. But You think back to the establishment of corporations. The reason that corporations were set up and why you have five or six people in an office is I could give my legal work to a paralegal to check it. Human beings make mistakes. Because AI's are based upon human constructed stuff, they're going to make mistakes. It's reduced now to 2 and 3% of their responses are flawed. Plus, the alignment of the AI, what is the AI aligned to do? It is a line to please you, and it will give you whatever you want, even if it's not true. So that's one of the issues, and we will go into this as part of discussing the editor in which you deliver your prompt or develop your prompt. Please reflect upon any factual information that you give. Do not or do not give responses for which there is not supporting information. That is one of the things that users have to put into the context of the AI.

Speaker 4

Thank you. Can I ask a question?

Speaker 1

Please.

Speaker 4

You said early on this afternoon that one, I think this is what you said, one-third of humans in the modern world have an AI companion. Is that what you said?

Speaker 1

One-third. One-third. That is, this is in, let's say, the United States. I'm, it is a large number.

Speaker 4

It's an unbelievable number.

Speaker 1

Remember that everybody is carrying around a smartphone nowadays. Who doesn't carry around a smartphone? And maybe that's-- but you're correct. You're correct. That is a very

large number. But maybe it's 1/3 of people who are interacting with it are have a companion. Keep in mind that this is one of the biases of myself and our age cohort. We are not on the phone 24 hours a day. But if you are kids walking out of high school as they're pulling their phones out of their, you know, that they had to put away in their class, 90% of them are on AI. Or if a kid just got mistreated in social media, they said, you know, I didn't like the way you looked in school today. and the kid is left the social media, where are they going to get support? They can get it from the enthusiastic affirmation that the AI's are trained. But Janet, that is an excellent question. I'll look for that because two weeks ago, It was in the New York Times. I'll look for that. And I may have saved. You know, I say I've got a stack of papers. Yes, he does. That I have to go through in order to. That's one of my projects for thank you for taking the course. This forces me to go through my machination. What I would like to do is to get Claude AI to help me develop a web application to look up materials for this seminar. Of course, you have to put I as the password. That's one of the things that I didn't discuss. When you look at some of these, the articles, you may have to supply a password. That covers me for the copyright protection issue. I can distribute things for educational purposes, but I can't just have it freely available to people.

Speaker 2

You have another question in chat. Kathy wants to know, how does AI select a light source when none is specified? Is that part of a bias? For example, light comes from the upper left.

Speaker 1

Yes, excellent question. The part about supplying a light source is you can supply it as you instruct it to make things. You can say, put the light source from the upper left. It does it by default. It's going to, it knows there needs to be a light source and you're allowing the AI, the discretion to choose it. And it would choose it based on potentially on the highest probability or the, it has a million pictures that it's examined, the highest proportion of light sources comes from where? The upper left. It's going to choose that. From the probability of the million pictures it looked at, where's the light source? It uses probability to respond to these issues. I think I got it across that I want you to use these prompts as your own. Edit them, add, experiment, jump from Meta to Grok to Gemini, Google to Copilot to what's the other? Claude does not have a graphics component, but we'll discuss ways to do. But I'm glad people are understanding that's the objective. I want you to take these and jumpstart so that you understand the editing, the iterative process. use it and then iterate, change things, make it your own. We'll discuss some of the problems with that next week.

Speaker 2

Kathy has a follow-up. Does that mean that the less folks specify every detail, the more homogeneous the generated images become?

Speaker 1

Yes. That is an excellent point. Yes, I do. I would say yes. I don't know that factually, but that is the tendency of AIs is towards homogeneity. What it, let me see if I can remember back to the law of large numbers. is the more material that they add in their corpus of training materials, the closer it's going to get to the homogeneous properties. Keep in mind that this is all statistics in the background. I tried to cover that when I showed that neuron. With the long, complicated math formula. That the Nvidia chip solves at the speed of light. That's all. That's what's occurring. It's. Trending towards the homogeneous. That's what statistics is about, trying to get a picture of the population. And the current version of AI we're looking at is based upon that.

Speaker 2

So if you transfer that to cultural, political, art, et cetera, that becomes a big issue.

Speaker 1

Oh, yes. Oh, yes. Isn't that what they're putting in legislation now? and I discussed a little bit at the beginning if all of the training is in English and they're using Australian, New Zealand, India, UK, Ireland, the European Union, Canadian, English, as well as American, What's the bias of English language going to be? And what's the bias of gender items? The one of the issues, Sarah Mullaly, was just appointed the Archbishop. No.

Speaker 2

Of Canterbury.

Speaker 1

Archbishop of Canterbury.

Speaker 2

She's the Archbishop elect.

Speaker 1

Archbishop elect of the Church of England. So if I were to ask, please create an image of the Archbishop of Canterbury at Canterbury Cathedral with the light source from the upper left, the bias will be to produce a male Archbishop. They tried that in the beginning, and they started having a female pope in the drawings, and they had a black Norwegian Viking,

and people were up in arms. And they are up in arms now. And the issue, the great issue, the bias within the AIs, the Congress has just talked about how AIs are woke. How do they legislate AIs not being woke? That would bias the correction of the woke would buy us what the English language actually portrays. So that's a question we have to put in front of AIs because it's beyond me to come up with a solution. But have a ball, folks, with the shape prompts. I make myself crazy. putting those shape things in at night. If I wake up at three o'clock with my mobile phone, I, because all of this is on the phone, copy, put in a formula, make different shapes. That was, oh, I, too bad I, and I'm gonna close on this, but I wanted to bring this up back, back. Oh, come on. I'm gonna go back. This was me. I'm not sharing the screen.

Speaker 2

Are you sharing something?

Speaker 1

Yes, I'm gonna I'm sorry. Share screen. Screen 2 share. I took, you're seeing, yes, you're seeing on the left there is a mathematical shape that I had it make, made on a polar coordinates grid, polar beam. And this on the right is an image from the James Webb telescope that is showing distant galaxies that humans have not seen before. And I couldn't help thinking that the mathematical shape that was generated is a description of these galactic shapes that are hundreds of millions of light years away from us. So keep in mind, this is quantum level mathematics that I've I'm trying to get it produced. I like the art of it. I like the art of mathematics. You know, that's what I'm a geek. But that is one of the one of the entertainments that I have for myself. And Maureen is sitting, I won't get a life. I saw you smile, Maureen. Any questions before we end here? It's it's it's worked. Okay. Thank you very much for attending. I'll try to get this on the web. The minutes quickly. Visit the website talks with pros.com talks with crows talks with pros.com. Let's see if I can end. Stop sharing.