Monthly Mastermind: Kevin Surace Official Transcript

James Altucher: Yeah. We're going to talk about AI, but Kevin and I started talking about how cities are doing. I don't think it's necessarily bad for the country when cities are damaged permanently like New York City, San Francisco, Chicago, and so on because the talent disperses throughout the rest of the country.

Kevin Surace: Right. That is indeed what's happening. And so it is working out, but if I were in commercial real estate and hanging on to something at a certain value, probably that's not the value going forward. That value may be cut in half.

James Altucher: No. Look at San Francisco, the big real estate developers and private whatever, they're just handing over the keys to the bank. They're saying, "Look, we're good guys. You take over the building. Here are the keys."

Kevin Surace: Did you see that with the big mall in San Francisco where everybody walked out basically and said... It's a mall developer. It's Simon Malls. I think it's Simon, isn't it? And they handed over the keys.

James Altucher: Yeah.

Kevin Surace: Handed over the keys to the bank and said, "We don't want anything to do with it. You can just have it." That's crazy.

James Altucher: I know. It's astonishing. They pour hundreds of millions of dollars into this mall and they're like, "Eh, didn't work out. Bye. It costs us more to keep going than to just shut it down." And what's the bank going to do?

Kevin Surace: It's an amazing time.

James Altucher: The bank can't sell it. If this mall owner got rid, who's going to buy it?

Kevin Surace: You know what, banks don't like to be in the real estate business as we learned back when we had the real estate crash, right? When everything falls on banks, the first thing they want to do is get rid of it at any cost. They do not want to carry that on their books.

James Altucher: Yeah. So maybe there's a bargain, but even if the bargain hunter buys it, what does he do? Turn it into an ice skating rink? It's not going to make any money.

Kevin Surace: San Francisco has a retail problem because people don't want to go to the shop because of the homeless situation and a variety of other things, right? During the day, the offices are half populated, so that cuts that in half. And at night, nobody wants to go there. On the weekends, they don't go there. It's a real problem, right?

James Altucher: Yeah. Look, it's like New York City though. The good thing about San Francisco is the residential areas around the downtown are fine. Just like New York City, if you go to the outlying boroughs, it's fine, but the bulk of the money, let's say Midtown and Wall Street in New York City is dead. So how does this long term affect the future of the city? I think we don't really know, but there's going to be significant problems.

Kevin Surace: It's a significant problem. So you moved to Florida in the pandemic?

James Altucher: I was in Florida. For a while now, I'm outside of Atlanta, Georgia. Well, what about you? Are you still in San Francisco?

Kevin Surace: Right now, I'm in Upstate, New York. We still have a place in California as well, but in summer and fall, this is a stunning place to be.

James Altucher: Why not go to a place warmer like Florida?

Kevin Surace: Because we have a place in Maui for the winter, so I don't need Florida.

James Altucher: Oh, okay. Well, there you go.

Kevin Surace: With all due respect to Florida and its politics, no, Maui is pretty good.

James Altucher: All right, good for you. So look, Kevin, you and I, we've spoken about AI years ago, long before the current... I don't want to say it's hyped because it's very real, the innovations in large language models, but what's hype? And we haven't spoken since about AI and what's hype, and I'm curious if you agree, is every... I can't stand it. All of these people who are the last they were doing was marketing whatever it is that they're marketing. Now, they're like, "Hey, join our master class mastermind six-day retreat to learn how to make a million dollars in a week using AI, how I made seven figures in three days using AI." I can't stand it. I've been working on AI-related stuff since literally 1987, and I know you're probably even longer than that.

Kevin Surace: Since the '90s. Since the '90s. Yeah, that's right.

James Altucher: And I'm an investor in your AI startup, Appvance. So what's going on? What's your take?

Kevin Surace: That's right. So look, here's my take. First of all, for the general public out there, right? We've been working on AI since the '50s as you know. This is not new. There's been nuclear winters of AI death, but the fact of the matter is every step towards large language models happened because of prior steps, right? Every single one. We understood neural nets decades ago, but we couldn't do deep neural nets until about 11 or 12 years ago because we just didn't have the compute horsepower and the cloud power, and everything else.

James Altucher: Just to put that in perspective, even the large language model of OpenAI, ChatGPT, as we know it now, it took a year and a half of basically supercomputers crunching the data with neural networks before we had a first draft, and then another year and a half of supervised learning with humans going back and forth with it. But it was a year and a half of computational power with the latest supercomputers that got done what we needed to get done, which is longer than it takes for a computer vision model and so on.

Kevin Surace: Absolutely. Only someone who had a billion dollars of Azure time and a billion dollar investment from Microsoft could have pulled that off. So it's not like some startup could just go and say, "Hey, I'm going to build a large language model that has a trillion tokens." It's not going to happen, right? So they had a unique situation where Microsoft said, "We will give you free use of Azure. You can use anything you want and I'll give you a billion dollars. Go for it." And that allow them in a very unusual startup way to say, "I'll just spend all the money and hopefully when you have a trillion tokens, you're going to get something interesting." Now, that's a huge neural net, as you know.

And then, it turns out you get this huge neural net and it spews out a fair bit of garbage because of course it was unsupervised. Unsupervised doesn't mean a human was watching it. As you know, I'm telling this for your listeners. Unsupervised means that all the information isn't tagged, say, whether it's real or fiction or true, whatever. So it's reading fiction, it's reading fact, and it's reading garbage too. It reads everything, right? Of course, it doesn't know necessarily that what it just read was fiction, a novel. And so at first, if you don't put guardrails around it and you say, "Do you love me?" Of course, it's going to build a sentence that says, "Of course, I love you. I'm madly in love with you." And you go, "It's sentient." No, it happened to read a hundred thousand fiction novels. Of course, it knows how to say I love you, right? It has no sentience whatsoever.

And so then as you know, OpenAI for more than a year hired a thousand people in Turkey, if I remember, to start building a rules engine around it. Now, what's funny is before we had deep learning at all, we built the entire AI infrastructure on a variety of rules engines. That's all we had, right? We didn't have the learning, so we just said, "I'll just build rules engines." So when I was building the very first versions of Siri for General Magic in the '90s, and that's what Siri was based on. It's all that work that we did. It was Hidden Markov Models for speech recognition, and then it was all these big huge rule models basically that said, if you asked... Well, her name was Mary. If you asked Mary, do you love me? We would have all these randomized responses that were put together, but it was a rules engine that was doing that, and of course people heard that and they said, "It's AI." Well, that's the compute horsepower we had. Right?

James Altucher: And Kevin, just on that, I didn't know you worked at General Magic on Siri because I worked for a while with Kai-Fu Lee, who developed the whole Hidden Markov Models to recognize what your voice was saying. It would use this very sophisticated statistics to recognize, and his basic project was funded by the Department of Navy, so the first example of Hidden Markov Models recognizing speech was fire the missiles and things like that, clean the deck. And then, he was over at Apple while you were at General Magic, presumably.

Kevin Surace: That's right.

James Altucher: Just a point of trivia, I was in Norway a few weeks ago and I met this former weather girl, weather woman named Siri, who apparently Siri was named after her because the guy, I guess, at General Magic or Apple or whatever who was the product leader, hypothetically, I will say... This is my words, had a crush on her and called her, and potentially... She said, "Let him answer this question for sure," but potentially named Siri after this woman.

Kevin Surace: Before Siri, there was Mary. And Mary is named after Mary McDonald, and Mary was our voice artist for Mary. By the way, that became GM OnStar. That's what we built, right? And so, we had millions and millions of users on this system that were all using speech recognition, and she could read your email and get your calendar and answer your phone for you, which is really cool. She'd answer the phone and say, "Oh, hi, Kevin, I recognize the number. What would you like to do?" "I'd like to get on so-and-so's calendar." "No problem. I'll put you on James's calendar. When are you available?" All of that existed in the '90s, right? But even with those Hidden Markov Models, what we would do is we hired, and we were the first to ever do this, a whole bunch of linguists that would literally listen to what you said and codify other ways to recognize it, so I'm going to give you an example.

We recognize that if you said, "Read my email," we knew what to do, read your email. I'll get you the first one. But some people would then say, "Get me my email. I want my mail. Where is my mail?" And you go, "There's a lot of ways to ask for getting your email." And so, you had to codify those through linguists. And in fact, when then Siri started, which was based on all the work we did at General Magic, and then that got sold to Apple, Apple did the same thing. They hired a whole team of linguists and started listening, started coding, and then you could opt out of being listened to if you look far enough, but that's how you had to do it. Well, now, we can self-learn. At that time, we couldn't self-learn. Now, we can have these models self-learn and get better by themselves, which is really,

really cool, and that's what deep learning did for us, right? That's what these deep neural nets did for us.

James Altucher: Yeah. I just want to specify what that means with self-learn, that it doesn't recognize that get me my mail means get me my mail. It just knows that the phrase, get me my mail, or I want my mail, or where's my mail, these all belong to the same category. It separates that out from get me McDonald's. It says to itself, "Oh, all these statements are still in the get-me category, but they're in two different contexts." It doesn't know what mail is. It doesn't know what McDonald's is. It's the supervised learning later that teaches what actions you should take based on these different categories.

Kevin Surace: Right. That's right. That's right. So look, getting back to GPT, look, GPT is overhyped in a way like all new technologies are, only because it's the first time the public got to play with AI. Now, you and I, being in tech, we've had our various brushes with all kinds of AI over decades and it makes some progress and you use it and it just becomes part of your work. Well, all of a sudden, the public got to type something in and it talked back to you and you go, "Oh, my goodness." Now, if you remember in the '60s, we had a system from MIT. It was ELIZA, and ELIZA, you type to it and it actually come back. It was a huge rules engine, but it was really pretty darn good. It was the first instantiation of a chatbot that you could talk to.

James Altucher: And I just want to say that the professor that came up with that, so ELIZA was an AI therapist, but it was very rules based. If the sentence contains the word mother, write back, tell me more about your mother. I think Joseph Weizenbaum might have been the professor, if I remember correctly. When he was out of the office, his secretary was playing with ELIZA. He walks back in and the secretary says, "Can you stay out for a few more minutes? This is getting private."

Kevin Surace: No. Really, really fascinating. Again, most of the public doesn't realize, this kind of chatting with an artificial human started all the way back in the '60s as an experiment, and we've been getting a little better every year and a little better every year. And then, we had products from Amazon. We had products from Google. We had products from Microsoft, right? They've all been getting better. And now, this has gotten to the point where it is almost indistinguishable from a human. Almost, right? You might be able to tell, but only because you can go to the system and it'll give it away. But generally speaking, if you didn't know, you'd say, "This is very human-like." And it's so human-like because, and you know this, you and I, but instead of learning words like we used to do before transformer, it learns phrases, and because it learns phrases, it just sounds a lot more human and it could put together phrases that mean something, rather than put together a bunch of words that's just a bunch of junk, right?

And by the way, hats off to Google in 2017 who figured out if I want to do translations to French from English, I can't just keep translating word by word because in France, that didn't mean anything. You could figure it out, but the sentence structure was all wrong. Then they said, "Why don't we just learn a whole sentence?" And then, you learn a whole sentence, and then you could formulate sentences out of what you said in English, rather than formulate word by word by word and that was the beginning of the entire transformer revolution, which again took us another step, better, and now we've got ChatGPT. Is everybody overhyping it? Yes. But will it impact most of everything we do? Sure, the way Excel does. We don't think of Excel as anything more than an interesting tool today, but it changed everything we ever did in finance, period. All of us. Changed.

James Altucher: And it didn't replace the entire accounting industry. In fact, there's more accountants than ever. It didn't replace anything. In fact, because it made us so much more efficient as a business, we were able to build bigger businesses faster, hire more people, and the economy developed. Not all because of Excel, but Excel had its effects just like many other productivity enhancing products.

Kevin Surace: This is the point. That's the point. And the point here is people go, "Oh, my job. I've never seen anything do this." Stop. Just stop. Since the invention of the wheel, all of these inventions improve

human productivity, and when you improve human productivity, you get more dollars of output per hour, which the US has been the best at probably in the world. More dollars of output per hour per person. When you do that, the companies get bigger, and I know someone's going to say, "Oh, only the people at the top make the money, et cetera," but just trust me, if the companies get bigger, the GDP gets bigger, you end up having more money to spend on vacations or products or consumer goods or whatever, and round the world goes in a very positive way.

The only way today you're going to double the size of your company because you can't hire double the number of people. There are no more people to hire. We're 10 million behind, right? The only way you're going to do it is get twice as productive as you were three years ago, and AI is going to help you be twice as productive. In marketing, I can now write a blog post in... Now, I'm going to probably spend a half an hour editing it, but it used to take me hours to write it, and now I can probably write it in one minute and spend a half an hour editing and I'm done. So, I may be 80% more efficient in writing a blog post than I've ever been in my life.

James Altucher: I was talking to Matt Barrie who's the CEO of freelancer.com. They have 60 million freelancers on their platform. He said A, "The number of freelancers are shooting up, which is why the unemployment data is so skewed, but it's great." Let's say you're a logo designer. Now, instead of doing one logo a week, you could do 10 logos a day because of Midjourney, but the companies still need someone with a design aesthetic. They still need a human to manage the product. You're not going to just be the CEO of company and design your logo because you still don't know if it's good or bad. You still need to hire the logo designer.

Kevin Surace: I think you're right on. What we're going to find is that we're going to make a few logos or a few graphics ourselves, and then we're going to go, "I'm not actually a graphic person." Now, we did democratize access to tools that allow you to generate graphics that you never generated before or to generate music or to generate video, all these things. This is amazing. But in the end, you're going to hand it to a professional, but instead of them taking three weeks, they're going to take an hour and they're going to do it at a quarter of the cost, and they're going to give you 10 things to look at that they think are really, really well-designed. You've got to pick one, and you're going to be out of that loop in an hour or a day, instead of what used to take weeks, and that's what I'm finding. I'm designing the next PowerPoint or keynote or whatever. I am getting all this material that I didn't have, that used to take weeks to generate that can be generated in minutes or hours.

James Altucher: What I tell people is exactly this that, "Don't think of AI as the terminator. Think of AI as your new assistant." And whatever you want to do, whether you're researching for a podcast like this one, or whether you're outlining a book, thinking of business ideas, AI can assist you with the right prompts, with the right questions. I don't think you're going to write the most successful novel in the world just using AI because that needs human experience and going beyond the human frontier to write something no one's ever read before. Same thing with music. Same thing with a lot of kinds of art, or not, we'll see.

People think, "Oh, well, this is AI now. Wait till next year." I don't think we're going to see exponential improvements. They've already crunched the trillion tokens and everything written in all of history, and this is what they have. And it still required several years of human supervised learning. So it's not going to be like, "Oh, it can write a bad novel now, so next year, it's going to write the most amazing novel in the world." It's just going to have incremental improvements. The technology's out of the box now. Now is where we have this... Like computer vision, this has been a solved problem for at least 20 years, and it's not gotten that much better. We're still doing the captions where we identify these are bicycles and these are street signs and that-

Kevin Surace: Yeah, you have to supervise it.

James Altucher: Yeah.

Kevin Surace: It's supervised learning. Now, our rec rates on images has now approached 98% to 99%. It's actually better than humans, right? For a wolf versus or a fox versus a dog, for example, right? A coyote versus a dog, the AI is better than we are necessarily. But what's interesting is past about 2015, it stopped getting better. We got to 98% to 99% in image rec, and that turns out to be better than humans are, and it just really didn't get any better than that because already we have unlimited depth of neural nets, unlimited training, and eventually just run out of stuff to train, right? I have no more data. I have no more supervised information to train you on. That doesn't start to corrupt the data. This is another thing.

Well, two things. One, AI makes these jumps, and you're absolutely right on GPT. GPT made a jump in large language models, and now there'll be a bunch of large language models that work faster or better work on giving you whatever. And that jump's been made, and now there'll be tiny, tiny, tiny, little incremental improvements, but if you go from a trillion tokens to 10 trillion tokens, no, it's not going to get that much better. You've asymptoted all you can get out of that database.

James Altucher: I'm going to use that as an insult, "You asymptoted your way out of that situation, you jerk."

Kevin Surace: Yeah. Well, I mean, that's all there is, right? It did this and leveled off. There's nothing wrong with that. The other thing, I'm going to give you a term. I don't know if you like it or not and I stole it. I used to say augmented intelligence. What's AI? What's augmented intelligence? You've got this assistant. Actually, it's amplified intelligence because I can take my one brainpower now and essentially be the equivalent of 10 or 100 brainpowers, right? In almost any field, whether it's medical, whether it's writing a novel, whether it's writing a marketing information, whether it's coding. All of a sudden, I can code 10 times faster than I was ever able to code.

Now, I've still got to debug it and it's still got problems, and so I still needs me, but I'm the equivalent of many, many, many brainpower now instead of one brainpower. This is incredible, right? And everybody's going to have more than one brainpower. Now, that has an interesting outcome. It says that IQ overall will get somewhat depreciated because everyone can have three, five, 10, 20, 100 brainpower and EQ and collaboration will become more important because if you've got all this brainpower and you're going off in a direction, but you didn't collaborate with anyone else, you could be down in the wrong direction, right? So collaboration between team members is going to be really, really appreciated. Well, anyone can use these tools, right? Once you learn to use the tools, you've got the IQ of the tool, which is really high.

James Altucher: That's an interesting question. I wonder if per industry, it'll be possible to measure the difference between someone using AI as an assistant versus someone not using AI as an assistant. So here's an example, let's say, I'm going to take a random one like tennis. Let's say an AI assistant can watch you play tennis, see the arc of your serve when you swing, and study all your health and your workout regime, and your training, and your opponent, and your games, and it gives you suggestions on how to train, how to swing, what equipment to use, what to eat, how to play against an opponent and so on. I wonder how much better the AI helped person will be than the non-AI helped person, and if that could be done per industry like writing, music, chess, business, and so on.

Kevin Surace: Well, that's a great question. So I think it depends on what you've got the AI doing. So in this case, we're asking the AI to be my tennis trainer as opposed to a professional trainer, right?

James Altucher: Yeah.

Kevin Surace: And then, you get to who was the professional trainer and how much experience do they do and how good are they interacting with me and all of those other things.

James Altucher: But augment it with a human trainer as well.

Kevin Surace: Oh, it's got to be better. As long as it can be multimodal, as long as I can give feedback and it says, "Oh, I saw your stroke and it's this." It's a little bit like, "Can I evaluate ECGs better with AI than I can

with cardiologists?" Well, of course I can. That was solved five years ago. We know we can because a cardiologist will miss things that are ever so nuanced that AI will see, and this is true with X-ray readings, right? The AI will see things that the human eye just won't pick up.

James Altucher: Yeah. In fact, they passed a law then that a human has to be the one to tell you the news.

Kevin Surace: Yes. Human has to be the one to tell you the news even though you're using these systems that know better, so then the human evaluates. That human doctor says, "Okay." Or radiologist says, "Well, okay. Well, I'll agree with this or I disagree with it, or whatever." The AI is right. Now, the problem with AI is a bunch of hidden layers, right? So when you've got these neural nets, you've got a bunch of hidden layers and people get angry, "Well, that's not explainable." Here's my explanation of why it's not explainable. When I look at you, I can say, "Oh, I know you, curly hair, glasses, probably has the headphones on, has a microphone." I get it, right? I know that, right? I know how to recognize you. But AI will recognize you in a thousand different ways and there isn't an English word for each of those methods, all those hidden layers. They don't mean to hide it. It's there's no way to explain what that was. I saw a little thing here or there's no...

So, that's the interesting thing is that you want AI to tell you exactly what it found and it says, "I can't, but after looking at a million x-rays, I know this person has cancer." I have no way to tell you why I know that or even maybe where I see it. It's just this is a pattern I've recognized before and the AI is unlikely to be wrong in those cases if it was well-trained.

James Altucher: Right. Now, let me play the devil's advocate a little bit, because I've spoken to a lot of people and a lot of smart people, and I've almost been disturbed by how negative they are. And just as an example, I was in New York City the other day and I had dinner with a bunch of hardcore scientists. These were professors, well-known physicists, well-known chemists, biologists, a Pulitzer Prize winning science writer, and other science writers, and they were universally pessimistic about almost every technology, but particularly AI like, "Oh, AI's going to basically turn the guns on the humans and decide to take over the world and all this other stuff. Hey, AI's going to make viruses that kill everybody." Okay, I get it some people are tend to be more negative than positive, but what are the negative aspects of it?

Okay, let's take another one. I had a conversation with Vernon Reid, who was the head of the band Living Colour, had the song Cult of Personality in the '80s, one of my favorite songs, and he was like, "What are you going to do when an AI version of your father's voice calls you and says, 'Son, I'm stuck in the middle of nowhere. I need you to wire this money right away. Please help me.'" What kind of problems are going to result?

Kevin Surace: Sure. Sure. Great question and great conversation piece. So first of all, everything AI is doing today in terms of deepfakes from voice to visual has been available in Hollywood for 25 years, right? This is not. We know that Hollywood has been able to deage people or put people in movies that have been dead and all kinds of things, and they're incredibly convincing and put people to change their face. They do all that, right? In fact, create people out of nothing as Pixar's been doing for 25 years, and this is a really fascinating thing. All this technology is doing is democratizing access to those tools. So those tools used to render one frame a minute and take six months to render, right? They were hugely painful to do, but the models for them were understood. They weren't the same as AI models are today. They were rules-based, but nevertheless, Hollywood's had these tools, but we knew that Hollywood wouldn't use them to call you and try to get your money, right? We knew that, so we trusted that.

So none of this is new. Deepfakes are not new. We could make Obama say anything we wanted to 20 years ago, however, it required Hollywood tools and millions of dollars, so nobody did it. Now, we democratized access even to this, and by democratizing access, it means we can use it for free or a dollar or two, and so could bad guys. Right? But this has been true with every tool in the world that has come forth forever, right? Bad guys use them. Bad guys use everything. There's bad guys who

use Excel. It just is what it is, right? They use banks that use the banking system.

So, here's another set of things, and it is true that already, people are getting calls from their mom or their grandmother and it sounds like exactly like them, "So please wire the money," and they think it's them, et cetera, et cetera. So we're going to have to be more diligent on what we believe because you will no longer be able to believe that watching that president in that park exchanging money with that person actually happened. In fact, you may have no way to tell whether it actually happened or not. And for all of history, we've always believed it happened unless Hollywood told us otherwise because they've told us otherwise for decades. That's not new, right? But now, this isn't Hollywood. It's just Joe Schmoe down the street, some kid who generates it. Right? So, we just got to be more thoughtful about what we believe and what we don't believe in. You will not be able to believe every video that you see.

Let me say one other thing. People have been Photoshopping things together, at least in still frame, I don't know, for three decades, right? So, deepfakes on Photoshop have been around, but you needed to be a good Photoshop jockey to do it well enough to hide the fact that you put the face on someone else's body and maybe you hid that with a necklace and all these tricks. Right? So, that's been done in Photoshop for 30 years, but you needed to know Photoshop, which wasn't that except for $100, you could learn Photoshop. Now, people can do it by just typing text, "Put this hat on this body and there it is." You go, "Okay, well, now I put them in a place they weren't. Change the background. Put them in front of an oil plant. Put them with money in their hand." I can do that with anything, right? So I've democratized access to it.

James Altucher: So I think this is the real problem. This is the real negative thing if you want to find something negative about AI, is that we're going to be dealt with a lot more, let's call them, scam.

Kevin Surace: Fake news.

James Altucher: Yeah, fake news, phishing attacks, scams. And it's going to be harder and harder to verify whether something's true. So, verification is the key. If someone claiming to be your mother calls you and needs money desperately, you just got to verify somehow that this is a true thing.

Kevin Surace: Yeah. Call your mother back, your actual mother on her actual phone. This is not hard. It takes an extra minute and that's fine. That is not a bad thing. The other thing is throughout history, when technology comes forward, new technology, whatever it is, do you notice... And I love scientists. We need scientists. You notice it's usually scientists, "Oh, it's the end of humanity. Oh, it's going to be all over." Okay, look, this is a language model that is doing for text and language what the calculator and Excel did for math. That's all. And we solved it in math decades ago, and now we're doing it for language, which is a much bigger problem. Do not hook the language model to the nuclear arsenal. Okay, this is a bad idea.

James Altucher: Right. And by the way, we've had the ability, because I was offered a job to work on this at MIT Lincoln Labs. We've had the ability to recognize using AI, which objects in space were junk, and which objects in space were nuclear missiles heading towards us. We've had that tech for 30 years. So never then did we hook up the AI to make automatic decisions.

Kevin Surace: Hey, in fact, we signed a treaty with Russia back in the '80s to not use any form of AI to automatically launch weapons, to give it to people who would then make the decision. There's actually a treaty against this, against using AI and hooking it up directly because we knew in the '80s, even with the AI we had then, which was very simple, that this was a bad thing. This was...

James Altucher: Right. So it's not like suddenly we're going to change our minds and say, "You know what, I want to kick back and have donuts. I'm going to let AI make these decisions for me." It's not like magically we're going to give AI the power to do something they could have done 30 years ago.

Kevin Surace: Right. That's right. No, nobody's going to hook it to the nuclear arsenal. Nobody's going to hook it to

crazy things. Everybody relax. It is not sentient. It is not dangerous. It's just a large language model just like we have large math models. And by the way, a large language model is actually a large math model. It's only math. In the end, all we're doing is we're signing probabilities to neurons, right? To neural nets to say, "Well, the probability to put this word after that one based on what they asked me is here, it's easy to, well, use." And that's all it's doing is forming sentences. Everybody relaxed, right? These scientists, God bless are wrong. Now you got a lawn out there going, "Oh, OpenAI is going to kill everyone. Then he starts his own company." So I think that's a little disingenuous. I think it was all positioning.

James Altucher: No, I agree. Whenever the one of these guys says something, even like Warren Buffett for his entire career, if he says there might be a chance terrorists could attack of the Super Bowl with nuclear bombs, what does he do next? He's an insurance company. He sells insurance to every Super Bowl.

Kevin Surace: Yes. Yes, he does.

James Altucher: So you always have to look at what the agenda of these guys are and God's speed are the most innovative people around in some cases, but Elon Musk certainly create a lot of innovation. But why do you think that Google engineer thought the AI he was working on was sentient? He presumably he's tech-savvy. He knows everything any other tech person knows. Why would he think that it was suddenly sentient?

Kevin Surace: I could only guess, and someone's going to hang me for, I can only guess that it was his subconsciously his time to get in a limelight. And today, you're not in a limelight if you're going, "Listen, it's just a freaking math model. Everyone calm down." It's, "Oh, it's going to kill us." Put you on every podcast. Right? So I'm here clearly stating I understand the underlying math, and so do you. "It's freaking math. Everyone calm down. Don't hook it to the nuclear arsenal. We're fine."

But if you're him and you're one of lots and lots of important people at DeepMind and Google AI and everything else, you're not getting any press by saying, "This is really cool." In fact, you're not getting anything. So it's better for you to leave and say, "I have interacted with this thing and I think it's actually sentient." Okay, well, now you get all the press in the world and now you're really, really important, right? But it's just BS. It's just math. If you understand the math, it can't be sentient. It does not know what it's saying. It learned from trillions of phrases and it put them back together for you in some random way, thoughtful way from novels and from truth and from fiction and from everything else with a huge rules engine around it. Again, that took a year and a half to put together. Everyone calmed down.

James Altucher: Right. It's like a simple way to think about it is the Google search box. If you type in the letters S-A-N, and you live in San Francisco, Google is smart enough to know that Francisco is probably the next word you were going to type. It's just using–

Kevin Surace: That's right.

James Altucher: It's the same statistics, but like you said, it went from words to phrases that are much more sophisticated and larger model. Now, what about cybersecurity? Obviously, AI is now going to be used by the bad guys to figure out where there might be holes in operating systems and so on that they can exploit.

Kevin Surace: So here's the interesting thing. Since the advent of ransomware, everything in cybersecurity has changed. So it used to be bad guys got into your network and messed it up, but because they hated you or because they could or because then ransomware came around and it was like, "I can charge $100,000 to not reveal their data on the web or just not steal whatever, or to give them back their data or give them access to the data, whatever." Okay. Then we started encrypting our data, and that meant that people getting into our network, maybe they could do some network damage, but they couldn't do anything with the data because all the databases have become encrypted except our applications. All of them know how to decrypt the data. So now, you want access to the applications

because then that's how you get the data. So then they go, "Well, I'd have to come in the front door."

Well, it turns out that's freaking easy because passwords and IDs are dumb. People use their kids' names and one, two, three, four, and use the word password as the most common password, right? So what happened is there's an entire network now of identity access brokers, and what they do is if you're a ransomware person, you go to an identity access broker and say, "I want access to someone, a Bank of America. Some teller, someone who has access to accounts or whatever you want to do." Right? That comes in through the front door and they go and get you that access, including MFA. So all traditional MFA has been hacked 100%.

James Altucher: What's MFA?

Kevin Surace: Oh, multifactor authentication. So the codes that come on your phone ridiculously easy to hack. They're easy. And I can show you the social hacks right now. I won't tell everyone how we do it technically, but technically it's harder, but actually pretty easy like in minutes, because I have your cell phone. I can certainly get all your codes this afternoon. That wouldn't be hard. Okay. But the easiest way to get MFA is actually simply a social hack. And social engineering is very easy.

So let's say you're at a company, but you're at a big company, not a small company, okay? And the big company, you're one of 50,000 employees. IT calls you, says, "Hi, this is IT. This is Jim or Bill from IT, James, we think we've got to break into your account. What I'm going to do is I'm going to initiate a login and password that's going to send you a code. I don't have access to that code, so I need you to share your code once, by the way, just to validate it, your employee number's this, your social security number's this." You go, "Oh, okay."

You're on the phone with them, right? You get your code, "You say it's 1234, whatever it is, right? They then put that in. They now have access to your account. They say, "You know what? We're in. We're in together. Looks like everything's fine. Thank you very much. Goodbye." You hang up. They now have access to that data. They're sucking out data, takes them 20 minutes. They've got everything they want. You handed them the multifactor authentication from your phone or from RSA card, or whatever it was, and now they're going to hold the company ransom. I know in one case $22 million recently in Silicon Valley.

James Altucher: Oh my god. Did that company pay?

Kevin Surace: Oh, yeah. Oh, yes. Absolutely.

James Altucher: What was the data roughly? You don't have to say exactly.

Kevin Surace: It had to do with running machines. And what they did is they essentially went in and changed all the data and they didn't have a backup for several weeks, and they wouldn't be able to operate the machines that basically shut them down. And so, it was cheaper to pay the $22 million and bring the place back up.

James Altucher: Wow.

Kevin Surace: By the way, everybody pays and almost no one knows. They don't publicize it, right? They try to just bury it. This is true with universities. It's true with hospitals. Every hospital pays. They cannot let that patient information out. That's it. So then you say, "I got to close the front door." So one of my companies that you're not an investor in, but it's a great company. It's called Token Ring. Token Ring is literally, I don't have one on, but it looks like this. It's a ring that you put on your finger, and when you put it on, it's tied to your fingerprint. So you've registered your applications with this ring, okay? That ring now only works on your finger, no one else's finger. They could steal it. You can lose it, It doesn't matter, right? And your bio information is stored inside the ring in a secure element. So if you try to get in there, it destroys the information.

James Altucher: In the movies, they're going to just cut off your finger and use it.

Kevin Surace: Well, yes, in the movies, but it turns out we're not trying to solve for people cutting off your arm. That's a different problem, right? That's a different level of crime. As you know, most of this ransomware happens from people far, far away in Russia and China, and in North Korea. So this is fascinating because now your access is tied to that ring and it goes behind your application server to something called a 502 server to validate that you are you, 128 bid encryption happens in one second so we can't decode that today and that speed, and it's different for every application, that validation. So it makes your access 100% foolproof, and no one can call you and say, "Give me your number." You go, "I don't have a number. What are you talking about? I have a ring. There's no information on the ring. There's no serial number. I can't give you anything. And they hang up, right? They go, "Well, you're not helpful. I can't do anything." Right?

So the solution is to close the front door. The solution is with I think wearable biometrics. And anyway, so that's one of the other companies I have. I think cybersecurity has to be solved, and in this case, AI can't beat it either. There's nothing AI can do. Because they can phish you all you want, but they can't get your ring. It doesn't matter. They can't get the ring and get access. Phishing is all about, "Hey, this is easy. I'm going to steal your password and your login ID." If they could steal even your password and login ID, but they don't have the ring, they still can't get in.

James Altucher: Will quantum decryption eventually be there for decrypting? Are we decades away from that?

Kevin Surace: Yes. So as you know, quantum computers are coming along and we're looking at things that are getting into the hundreds and then thousands of qubits now. So this is really fascinating. However, we're talking about two or three quantum computers in the entire world that live at Google and IBM, right? So there's no one has access to these things right now. So I think we're at least a decade away from bad guys having maybe two decades away from bad guys having access to a billion dollar quantum computer, right? This access is highly limited, and it's for researchers right now. And these things are only doing one thing.

A quantum computer could certainly decrypt 128-bit encryption. If you could do a man in the middle attack, it could decrypt it in a second or less. However, you've already completed your transaction and it's gone, and the next time that those encryption keys will be different. So it still may not solve it because that rotates around. It's not as simple as I've decrypted it and now I've got it, right? By the time you've decrypted it that they're already logged on and they're doing their thing and there's nothing you can do, right? It's a little bit late. So I think it'll still be hard. I think it'll be two decades before bad people have quantum computers, and by then we may do 512-bit, 1024-bit encryption.

James Altucher: Yeah. There are algorithms off also for when there is quantum encryption or decryption, but I just don't know how far advanced those algorithms are, and I don't know how fast we can employ them.

Kevin Surace: The problem is the speed of the processors, right? So think about the processor I have inside a ring that I have to do decryption on. So I could do 128-bit encrypt decrypt, but if I had to do some quantum encrypt decrypt, that's just a massive amount of processing power that I might not have in a bio ring, right? Which has a tiny little processor in it. That's a problem 20 years from now. Again, no one has access to these things, but researchers at IBM and Google. So you can't log on and say, "I'm using a quantum computer as a bad guy in Russia." You don't have one, and Russia's not going to develop one. They lost whatever brain power they had.

James Altucher: And I guess the other thing that's very interesting in the AI space is how many AI companies have started overnight. There's hundreds of thousands of AI companies have started in the past few months. And my own gut feeling is when I look at these companies is that there's nothing special. It's so easy now to just hook up to the API of ChatGPT and make a pseudo company that anyone else could also create overnight. So on the one hand, the price of making an AI company has gone to zero, but on the other hand, none of these things are worth anything because they're not really-

Kevin Surace: Yeah, that's right.

James Altucher: ... doing anything of value.

Kevin Surace: That's right. Where's the moat, right? Do you remember when mobile, once the iPhone came out and then there had to be a hundred thousand mobile first companies? I'm doing mobile. And there were, I don't know, easily a million app companies that were writing apps for iPhone, right?

James Altucher: Yeah.

Kevin Surace: Are there like 20 that ever made money, some number like that? It's amazing, right? It's a very, very small number of apps that ever made any money yet all of these companies got VC funding. Tens of thousands of companies got VC funding to do some app for the iPhone, of which nobody made any money. In fact, all the downloads are Facebook, Twitter, you know, can just go down. You know what they are, right? There's 10 downloads that everybody has, and then usage on their phone goes pretty low. So most of those app companies didn't get anywhere. And that's going to be true with AI, right? Everybody's going to do AI, but if you can write an AI interface in a weekend, your moat is too small.

Now, there's other companies, Appvance is an example. It's taken years of AI effort to get to where we are. Yes, we're also leveraging large language models in unique ways, but even that is another year of effort to make that work across the plethora of mobile and web applications. It's not something you do in a weekend and hook up in a weekend and go, "I'm in the test business." Now, there's a few startups that have said, "Oh, that's what we're doing. Good luck." When do you have to test every application with every library, with every different set of code that someone has created? Turns out it's very hard. It's really, really hard.

Then you've got to use visual information. It's got to be multimodal. And then people give up, and I've seen this happen. People start and then a month later they're gone and two months later and they go, "This is really freaking hard. I thought it'd be easy." So I think the easy ones, you're right, and they probably shouldn't get funded, and there's a rush to fund them, and the hard things will be hard, and some of those are going to succeed.

James Altucher: Yeah. And again, I think just to wrap this up, just as a mindset view, for every possible problem where you get scared, "Oh, AI's going to replace me. This is going to happen, this bad thing." Think of AI as an assistant, instead. AI will be a very good assistant and will make your life better. And it's not that hard to figure out and start using. You could do it today. You could just go to whatever. Let's just say you go to openai.com, chat.openai.com, sign up for free and start using it. And you'll see. You can use it as an assistant for most of your jobs.

Kevin Surace: Copilots, that's now been out two years from Microsoft, by the way, it's in GitHub, right? Two years we've had Copilot that helps you code, and it's getting better and better. It's based on GPT-4 now. That is making coders latest stats 55% more productive, 55% more productive. You can't use it without a coder. It would be ridiculous, because it's just giving you snippets of code and hints of code and it doesn't always work. And then you have to modify it to make it work for exactly what you're doing, et cetera. But that means I don't have to write every line, it'll spit out 20 or 30 or 40 lines of code just from my typing, just like word does.

I start to type and it starts to finish the sentence. That is exactly what Copilot for coding is doing. It literally finishes your code. It's not exactly right all the time. Sometimes it doesn't compile, but it's better than what I used to do, which is go to GitHub or go to a variety of open source places and start to look for open source examples. You'd want to start with an open source example often today for this function. Now, it's just giving you that example. It's a 55%. That means in theory, we might be able to double the productivity of coders using this. And so, it should be a given in every coding shop that, of course, you're using Copilot.

James Altucher: Do you still code?

Kevin Surace: No. Here's the problem, right? As you move up in management and you move into architecture and things like that, you lose the ability to do it syntactically correctly, right? So I could still sit there and write pseudocode and people go, "Okay, I know what you mean. Let me go fix it." But to sit there and do it, you have to know the syntax and you have to remember the syntax exactly, exactly where does that bracket go? And exactly where the comma goes. And so if you don't do that all the time, you lose that.

James Altucher: Do you think Asia has something to do with it? The last time I tried to code was about two years ago, and I just was really unbelievably strikingly bad at it. I've put in my 10,000 hours on coding, and–

Kevin Surace: I did too.

James Altucher: ... I really just can't do it anymore.

Kevin Surace: I don't know. It's a great question whether age has to do it or we simply just graduate to higher level thinking, right? And you get to, again, architecture and systems level and thinking about where the world. That's just not a skill. Okay, could you do long division? You might not be really good at it, but if you've struggled with it for a while, you could do long division, but you haven't done it since, I don't know, fifth grade maybe, right? Nor have I. But we were taught it, but we've forgotten how to do some of that because the calculator came about. So I don't know.

I think if you said, "I am going to learn Python and I'm going to take a month to learn it or two months." At the end of two months, you'd be every bit as good as you ever were. And you might be more thoughtful about it, you'd probably be really fast, but you might not enjoy it. You might say, "This is dumb because I could beat at a whole other level." So look, I think Copilot is a miracle for coders. It's fascinating. But no, I wish I coded as fast as did when I was at IBM, and I could just rip code out thousands of lines. But those days are behind me and you got to give up something, right? You just can't do everything all the time.

James Altucher: I guess. So yeah, sometimes I try to do everything all the time, but it doesn't work, but–

Kevin Surace: Doesn't work.

James Altucher: Kevin Surace, thank you so much. There's been so many questions and angst, and anxiety, and curiosities about AI just from everywhere. And I've had my own frustrations just seeing how people have been abusing the words AI and what they do. But look, they're trying to make a living too, so I don't blame them. But thanks so much for helping clearing the air on all this stuff and good luck with all your entrepreneurial efforts, particularly the ones I'm invested in, so...

Kevin Surace: Yes, exactly. Exactly. Well, we'll keep plowing along and we'll get back together and maybe in six months and see where AI is then. But I think all this hype is going to settle out and it's going to settle into, like I said, what Excel is today. It's a great assistant, it's a great tool for us. It doesn't run itself, nor will AI. You have to prompt it. You have to get stuff back, you have to edit it, you have to be thoughtful about it. But what a powerful tool and what a great time to live. I can't imagine living in another time. I'm sure our parents thought, "Oh, there's color TV. Look at that." Okay, this is way better than color TV.

James Altucher: Right. No. And because of the increase in the speed of computers, it's created exponentially growing industries in many other industries that required the computational power. So initially, computer technology was the only industry exponentially growing, but now that it's exponentially growing, it's unlocked the power for other in industries to exponentially grow. So that's what makes this super exciting time now, so I agree.

Kevin Surace: It's amazing. Best time to live.

James Altucher: Yeah. So thank you so much, Kevin, and I'll talk to you soon.

Kevin Surace: Yeah, a pleasure.