This is the Everyday AI Show, the everyday podcast where we simplify AI and bring its power to your fingertips.

Listen daily for practical advice to boost your career, business, and everyday life. How will AI change financial risk management? You know, and how are financial institutions going to be impacted with the rise of AI and what does that ultimately mean for us, the consumer? All right, that's what we're going to be going into today and more on Everyday AI.

Welcome, my name's Jordan, and this is your daily podcast, free newsletter, livestream helping everyday people like you and me make sense of what's going on in the world of AI and how we can actually use it to grow our companies and grow our careers.

So we're going to be diving into what's happening in the world with financial risk management and how AI is impacting all of this.

It's super interesting because AI has been used very widely for many decades in the financial institution, but recent kind of updates and features, I guess,

in generative AI are going to be impacting

financial institutions as well.

So very excited to get into that.

But before we do, let's go over the AI news.

And as a reminder, if you're joining us live,

like we have here, Dr. Harvey Castro joining us live,

Christie Slack joining us live, thank you.

Get your questions in.

What do you want to know about how AI will change

the financial risk management sector?

All right, let's get going.

Go over AI news.

We're actually just going over two pieces today

because they're bigger pieces.

But as always, there's more news.

Go to youreverydayai.com,

sign up for the free daily newsletter.

All right, so the White House has released

the US government's first ever executive order on AI.

So President Biden unveiled a new executive order

on artificial intelligence that aims to address safety concerns, protection of civil rights, and supports for workers in the industry. So this new executive order involves creating new standards, protecting consumer privacy, promoting innovation and competition, and also collaborating with international partners.

This executive order is the first binding action ever

This executive order is the first binding action ever taken by the US government on artificial intelligence and includes regulations for large companies to share safety tests with the government before release.

That's an important part, we'll see if that happens.

Also, this prioritizes the development of AI standards

for testing and watermarking,

as well as guidelines for agencies $% \frac{1}{2}\left(\frac{1}{2}\right) =\frac{1}{2}\left(\frac{$

using commercially available data.

So pretty big announcement.

Again, we covered this last week when the news came out,

but this executive order was just released and we're gonna have a lot more on this one

in the newsletter today.

All right, our second piece of AI news

and last one for today.

Some new chat GPT updates, all right?

So nothing official yet from parent company OpenAI,

but if you've paid attention at all

over the last two or three days over the weekend,

to the internet, to social media,

you'll see that chat GPT is already starting

to unveil some pretty big updates.

So many users are now sharing these new updates and probably two or three of the bigger ones

are a reported updated knowledge cutoff date

of September 2023.

So this has already changed once it went from September 2021 $\,$

till January 2022 for GPT-4, the paid model.

But apparently now it's being rolled out.

The knowledge cutoff is all the way up to 2023,

as well as kind of the other big feature

or the big announcement here is the all tools mode,

which is essentially being able to upload photos,

PDFs, receive dolly images all inside one mode.

So without having to flip back and forth

between multiple modes.

So really getting the first taste of multimodal in one single chat versus having to go

into multiple different modes.

All right, a lot more on that later in the week.

We're actually gonna have a dedicated show

on new chat GPT updates and the future of chat GPT

with the developer conference coming up this week.

All right, but you didn't tune in to hear about chat GPT

and you can again, always go to your everyday AI.com.

For more on that, you are here to learn

about how AI will change financial risk management.

So I'm very excited to have today on our show

and please help me welcome.

We have, there we go.

We got him on the screen now, Sandeep Myra,

the founder and CTO of Raven Risk Intelligence.

Sandeep, thank you for joining us.

Thank you so much for having me.

Really, really honored to be on the show.

Yeah, absolutely.

Let's start high level real quick.

Just tell everyone a little about yourself

and about what you're doing at Raven Risk Intelligence.

Yeah, so I'll keep the part about myself pretty brief.

My backgrounds in computer science

actually took an AI class at Cornell 30 years ago.

It's kind of remarkable when you think about

what's happened recently versus the last 30 years.

And so my side anecdote was in that class,

I took out the textbook from the class,

I still have it a few days ago,

and it said, there's a small section neural networks,

which is what LLMs are based on and chat GPTs based on.

And it said, it's not showing much promise yet,

but the people, the neural network researchers

think that with enough computational capacity and data,

it's going to emulate human decisioning.

And it said, only time will tell.

I don't actually send the textbook,

only time will tell what actually happens.

So anyway, so basically,

I think there was a long AI winter.

I mean, in the meantime, while I had an interest in AI, more broadly had an interest in analytics. I worked at a lot of financial firms and applying essentially, I would say, algorithmic techniques for financial risk management in particular and some trading systems. So I've worked at JP Morgan City Group, BNY Mellon, and more recently founded earlier this year, an AI venture called Raven Risk Intelligence. And I'm happy to talk a little bit about the objectives of the venture, Jordan, if you want me to go there next. Yeah, yeah, let's just go high level. Let's just talk a little bit about what it is so everyone can understand. So yeah, just tell us a little bit about that. Okav. So essentially, and I think very broadly, the three thesis is twofold. So one of them is, and the venture is actually in commercial and corporate credit lending, not the consumer credit space. And the commercial credit space, there's a lot of manual effort done by large teams of credit analysts to try to gather information about the borrower and also the economy. So it includes things like, finding out about the business strategy of the company, the strength of the management, any competitive threats to the company, and then from a more macroeconomic standpoint, it would be things that might be happening in the economy and so forth. Now, today basically, most of the information, automated information that they get, tends to be pretty static, you know? They have to actually kind of scour essentially unstructured data sources,

like the ones that I'm just mentioning, to come up with a view on whether this is actually a good credit or not. So our first goal is to help automate that, which will lead to actually increased ability to process more loans. And frankly, be able to give more loans to more companies by taking into account a broader set of inputs, rather than just, you know, is the company profitable today or not? And that actually, frankly, I think will enable a lot of smaller borrowers to get loans more easily. And the second part of it is, you know, what we're calling predictive risk analyses, broadly speaking, which is, you know, how are things gonna perform over, you know, like a wider period of time, but using fairly advanced analytics and machine learning analytics to draw correlations between, you know, different things that are happening in the industry and in the economy. I love it. And Cindy, maybe help us also, you know, for those of us that don't follow the financial sector very closely. You know, let's just talk, you know, briefly about, you know, financial risk and risk management and kind of historically, you know, where it's been recently and how you see it changing now with advancements in generative AI, you know, and like you talked about, you know, I love that you mentioned the textbook from 30 years ago and, you know, kind of the AI winter, but now we're getting to the point where, you know, AI is really helping in that decision-making process. So like, what does that mean broadly for the financial risk management industry?

Yeah, so I think, you know, like very, I think broadly speaking, you know, some of the things that I think you, so let me just back up a little bit.

The way that, you know, at risk management works today and even actually the more advanced risk management techniques, you know, tends to be taking into account what we call structured data and that data is, you know, things that are tabular in format, like, you know, rows and columns or things, you know, simple stuff, frankly, like, you know, what is the revenue of the company, you know, what essentially they do take into account some macroeconomic indicators, like, you know, what is the GDP growth in the economy, et cetera, you know, and I think, and that's the, that has been the cutting edge actually, unbelievably, like that's the limit essentially of what they're, they're automated sort of tools and risk management can do today. And then they take those, what I call structured and the industry called structured risk factor, structured input, sorry, and then, you know, put them into models that attempt to make decisions about outlooks of risk for a given, let's say company or sector, you know, now the problem with that, which is kind of leading to earlier is that it's actually relatively narrow. It doesn't take into account things that are, you know, let's call it unstructured, which are information pieces that might, you know, happen that are not, you know, tabular in format, frankly. So an example could be that, you know, there's a war that breaks out somewhere, you know, like maybe in Taiwan or wherever. And, you know, these models actually can't really take that into account at all, you know, it's human judgment that then tries to figure out, oh, well, what exposure does this company have to Taiwan? And, you know, and that can be a very manual and be not very comprehensive leading to frankly inaccuracies. So I think the objective is that, you know, with the event of machine learning, you could take these events that happen

and basically in real time, which is pretty amazing. And then, you know, correlate that with impacts to, you know, to the economy and to even individual companies. Yeah, and just real quick and maybe Sandy, if you can even help me better understand this, because I'm always trying to learn as well. So with unstructured, or sorry, with structured data, that's been used in the, you know, financial industry and for risk management for decades, right? So that's where, you know, machine learning and AI gets all of these data points and they can categorize them, right? And they can say, yes, this pattern of data over the course of, you know, hundreds of thousands or millions of data points, we could make decisions based on this structured data. Whereas unstructured data, it's a little harder for AI models to be able to understand that and to be able to translate that to risk because it could be things that require more interpretation or more interconnectivity that may be hard for traditional AI models to perform those tasks. But that's maybe where now with large language models where you can start to make use of some of this unstructured data and tie it to risk management or to assess risk. Is that kind of a good overview? And then if so, how do you think large language models might be able to help pull this all together? Yeah, well, firstly, I think that's an incredibly perceptive observation, frankly. I was worried, I was worried. I wouldn't say that you don't know a lot about how to use AI and risk, you probably actually know quite a lot. Because I think, you know, you've connected a lot of the dots, actually, which is what these models, you know, obviously are doing in terms of trying to figure out what, you know, the impact is to risk. So, yes, I mean, I think, you know, you're correct, firstly, that structured data and having models, even some machine learning models actually draw correlations on structured data has been around for, you know, some years.

And, you know, they've done a pretty good job, actually. So for example, in fraud detection, you know, whether it's credit card fraud or, you know, even a trading fraud, you know, these models have been around for a few years where they look at different patterns of behavior of, let's say, consumer barring. So let's say that, you know, you go basically abroad somewhere that you haven't been before. You know, you've noticed guite often that the credit card company will, you know, call you up or even block your card from usage. Because they're noticing, you know, essentially an anomaly in your, you know, in your credit behavior. So that's been around for a few years. But I think what is new though is to, you know, use essentially this for other use cases and do it at a much larger scale. And so an example is, you know, Silicon Valley Bank actually might be a good example. So in Silicon Valley Bank, you know, what happened was that the, you know, the Fed raised interest rates very rapidly. The bank essentially had what's called the liquidity. So that's called market risk, you know, rates are considered to be like market events. That led to what is called liquidity risk issues, which is that, you know, the bank didn't have enough money, cash on hand, you know, to actually satisfy all its depositors, because banks take depositors, monies, money and loan them out. They're just not, they're not just sitting in the bank because they have to own interest for the bank so that they can pass their interest on to the depositors. So they had what's called a liquidity risk issue. And because of that, you know, they had what is called a credit event, which is the bank essentially, for practical purposes, defaulted, right? Which is essentially meaning that they could not satisfy, you know, their creditors who actually their depositors are the creditors in this case. So that, you know, I think that interconnectivity

would have been much more easily apparent with the use of proper training of AI models and how different risks are interconnected to each other. And I think what happened at Silicon Valley Bank would have been almost completely predictable with the better use of this interconnected AI models that I think you're talking about. And large language models in particular, you know, just to double down on that part of it, but are actually really good at that. So they basically, you know, I know they call large language models, but underneath the covers what they're doing is looking at, you know, connectivity and correlations between different things, and then figuring out essentially, you know, what to so-called generate. And that's why it's called generative AI. But you can use that not only just for pure language, but you can actually use it for drawing, you know, correlations and patterns essentially between all kinds of data sets that was not achievable before. So I think those large language models can be very, and those techniques, I guess, the modeling techniques that are used in LLMs can be very useful for, you know, risk analytics as well. Yeah, and hey, as a reminder, if you're just joining us live midway through, we have Sandeep Mayra, the founder and CTO of Raven Risk Intelligence. And if you have questions, please get them now so we can give Sandeep a chance to answer your guestions. And Sandeep, I'm so glad you brought up, you know, this Silicon Valley Bank kind of collapse, because I think that's maybe one of the most relatable for many people in terms of financial risk, because we saw, unfortunately, things go down an unfortunate path for many involved. And I think some of the initial response to that is people said, hey, you know, with all of this data, with all of this, you know, artificial intelligence and machine learning, how did this happen?

And you kind of started to, you know, help us solve that. It's, you know, kind of different, I guess, models or different sets of data that maybe weren't talking to each other. So, you know, with even generative AI, I guess, that could potentially help solve this in the future, what are still those obstacles to overcome until we can have, you know, generative AI, you know, help kind of, you know, quote unquote, connect all these different, you know, pieces of data or these different models together, what do we still have to do? And then maybe even what are the risks of doing that? Yeah, no, that's a great question. So, you know, so firstly, I think, you know, these models can are only as good as the data and how the data is essentially presented to them. And so, you know, they're not magic. I mean, they basically might seem like magic, but the reality is that all even chat GPT is doing is it's taking all the data on the internet and, you know, trying to do its best essentially to come up with what makes sense from an output perspective. But not everything is on the internet. So particularly, I think in some of the, you know, business domains like in commercial credit lending, vou know, a lot of the, you know, a lot of essentially the inputs actually come from human inputs that are not co-codified on the internet, you know, so for example, like you might have something that is somewhat subjective about, you know, essentially, let's say that, you know, there's this going to be a change in the business strategy of the company as an example. And then guite often there's a subjective decision made by the bank about, you know, does that business strategy lead to potential risks to company or not? And, you know, and how big is that risk? You know, like, and I think so the, these large language models are not yet at the stage where they can clarify things that are

and even come up with correlations for things that are not, you know, readily present the data. And so human, what's called human reinforcement learning. There's actually a couple of terms for it. One is called long winded term. I mean, these guys come up always in the space of very long acronyms and, you know, unobscure terms, but it's called reinforcement learning with human feedback, RLHF. And that actually is actually pretty hot area of even research ironically is to actually get humans to at least partially train the more obscure and more critical parts essentially of these models because the impact of these models and business decision can be pretty severe. So somebody could be denied a loan, for example, and you know, could actually mess up their business. If the models present data that is, you know, outputs that are not completely accurate. So that's one thing. So that's, I think, one thing that I think is, you know, like a challenge, but I think there's some ways, like I said, it's an act of space is to not, to take these automated models and LLMs and charge EPT like models. but then in, you know, apply some human oversight and inputs onto that, onto the modeling process. The second one is, you know, that in finance and particularly regulated finance like banks, you know, they tend to be very highly regulated. And so the regulators are very nervous about using machine learning frankly in general for decisioning purposes. They started to get somewhat more comfortable about using machine learning for using structured data, particularly for things even like consumer credit, but they're not yet there in terms of using unstructured data and machine learning to come upward decisioning. I think we all know about, you know, many of us know about hallucinations. So these models are not completely accurate. You know, guite often, frankly, if you're there asked very specific questions, you know,

they can, some of the data is inaccurate, which is frankly not acceptable in the finance space. I think the regulators are very nervous about that and probably rightly so.

So I think one of the things that, you know, I think it's going to be a challenge is actually A, getting the models to be more accurate than they are today.

than they are today.

So moving them from a consumer space to an enterprise decisioning space, and then getting, you know, once that happens and getting the regulators comfortable, which is not always easy with hopefully improvements and, you know, in the decision recommendations from these models.

And then a related point to that actually is something called explain abilities that the regulators and even the firms themselves,

you know, don't like black boxes.

So they want to know essentially some idea of how the models came up with these outputs and recommendations based upon the inputs, you know.

So they want some traceability

between the inputs and the outputs.

And, you know, unfortunately today,

deep neural networks like chat GPT are not able to do that.

I mean, the models are so large

that it's not easy to actually trace

how chat GPT came up with the outputs

based upon, you know, billions of points of input

from the internet.

So that's going to be another frankly challenging area as well.

Hey, this is Jordan, the host of Everyday AI.

I've spent more than a thousand hours inside chat GPT

and I'm sharing all of my secrets

in our free prime prompt Polish chat GPT course

that's only available to loyal listeners like you.

Check out what Mike, a freelance marketer,

said about the PPP course.

I just got out of Jordan's webinar.

It was incredible, huge value.

It's live.

So you get your questions answered.

Pretty stoked on it.

It's an incredible resource.

Pretty much everything's free.

I would gladly pay for a lot of the stuff

that Jordan's putting out.

So if you're wondering whether you should join the webinar,

just make the time to do it.

It's totally worth it.

You know, so as AI can help in all of these areas,

and I'm sure that's where the, you know,

the financial risk management, you know,

experts are starting to spend their time in.

Where do humans kind of fall into this future equation, right?

Like, is their job going to change?

Are their responsibilities going to change?

And like I said, is this maybe a good thing or a bad thing?

And, you know, what are even the risks of that

as, you know, leaders working in this space

are maybe using and leveraging more AI?

What do we have to keep an eye on to make sure

that this is successful in terms of, you know,

risk management and handing these things off?

Because it sounds like AI can really help in some of these areas

and to, you know, help connect some of these disjointed,

you know, verticals where we have all this different data

that exists.

But then, you know, how does that change then?

You know, what ultimate responsibilities,

you know, lie on us humans?

Yeah, so basically, you know,

firstly, I think in terms of the, you know,

things related, I think people are nervous, you know,

I'm certainly, and I think frankly,

the more people use strategy between some cases,

the more nervous they get because they see,

you know, how powerful it is, right?

So people, you know, for good reason, you know,

we're worried about their jobs.

I even get questions from people about, you know,

what feels like kids to study in, you know,

that will be less adversely impacted by AI.

You know, so there's a lot of, I would say,

valid actually questions and concerns about, you know,

the impact to, you know, to social impact, but also, you know, impact to the workforce. You know, my view is somewhat more, somewhat fairly positive, at least in the long run. So, you know, I think in the long run, things that are more tedious will be taken away and, you know, essentially machine learning and AI can automate those tasks. But there are things that, you know, I think are harder actually for machines to be responsible for that humans actually could play a bigger role. So as an example is even in this risk space, you know, in the productivity that I was talking about, you know, I was talking to somebody very senior at a big bank and risk and he was saying that, you know, he's found that their credit risk analysts actually find this gathering of information and then trying to summarize it to come up with some, you know, outlooks is very tedious and actually the turnover he's found in that, you know, in that part of his team is actually pretty high. So I think essentially, you know, it will remove some of the more tedious tasks and enable humans to focus things, frankly, that are more interesting and more value add. So I think that things that we can do in the future that we don't even know yet, you know, I mean, an example could be in the media space that, you know, people are very worried about AI basically generating movies automatically and taking away actors jobs. Now, in the short to medium term, that's a valid concern. But in the longer term, if you think about it, somebody who's very creative, you know, could essentially as one person potentially, let's say, you know, venture in the future create a full-on movie on their own, you know, which today is very difficult for creative people, frankly, to break into, you know, getting large audiences. It's not an easy task. I do think that there's opportunities for leverage here. If you think about it, just one last point on that, it's not completely dissimilar to the Internet, you know,

where essentially people were very worried that the Internet would take away, you know, lots of jobs, particularly in some sectors like retail, you know, on Amazon, the advent of Amazon and so forth. But I think if you look at, you know, another way, there were many jobs created related to the Internet that, you know, in many ways offset the, more than offset the job losses in other sectors. You know, one thing, one thing AI, as a super aside, one thing AI can't help is me charging my mouse battery. So apologies, I do see some great comments coming in, but my mouse actually died, so I can't bring them up. I'm sorry, but maybe, Sandeep, you know, as we look forward to the future of risk management. So one thing I maybe want to get your thoughts on is how this ultimately impacts consumers, right? Because I think, you know, if we're like, if we're looking like what's actually very tangible to consumers, you know, one thing that we probably worry about is, you know, risk and fraud. How might we, the average, you know, bank consumer, you know, we have our savings accounts, our 401Ks, our IRAs, credit cards, all those things, how might we be impacted by all of these changes that we're kind of talking about? And even as it comes to risk, you know, are consumers ultimately more at risk in the long run or maybe are we less? No, I think actually in risk it's, and frankly, a net positive, because, you know, like I think one of the issues in the consumer space today is that people who don't have what's called traditional credit history find it hard to get, you know, credit, including credit cards and loans. And, you know, I think by taking essentially what we're calling unstructured data sets, like for example, let's say that somebody doesn't have a long credit history, but they've got a, you know, a good history of paying their regular bills on time, like the utility bills, et cetera, right? And they've been, you know, so I think those kinds of data sets that haven't been used today could provide essentially better,

you know, like I would call outlooks in terms of

what the consumer's ability or, you know, ability to pay back essentially the credit looks like. So I think it actually will expand, in fact, access to credit for consumers who have had a harder time, you know, getting credit today. And frankly, that includes, you know, minority populations or people who, you know, who for through no fault of their own have had, let's say, a rough time, right? But inherently, you know, they probably can be a good credit going forward. So I actually think it's a net positive. On the commercial space, the impact is probably less directly visible. But another way to look at it is that, you know, if companies get easier access to credit to, you know, that essentially helps these business owners, you know, some of them are small business owners as well, not just large corporations. And then, you know, that ultimately helps the economy by ensuring that the economy is more productive and reduces prices for consumers. So you don't want an economy where the access to credit by both large and small business, businesses is appropriately allocated because that ultimately drives, you know, what benefit and prices that consumers pay, vou know, on the street. What's, so, Cindy, we covered, we covered an awful lot here. You know, we talked about, you know, historical use cases for AI and machine learning over many decades, right? Like even going back to, you know, a course you took some 30 years ago, and then we kind of got caught up to current day. And, you know, some of the challenges and also some of the opportunities that are associated with, you know, financial risk management in the new age of generative AI. But maybe what's that one point

that you would really want to stick with people, right?

So whether they're in the financial industry or if it's just everyday person, what's kind of that one big takeaway that you would want us all to hopefully understand so that we can better understand kind of where financial risk management is going now, now that we have access to better, more powerful, and more connected AI systems. Yeah, I think the general point that I have, and maybe it's not just specific to financial risk management, and it's maybe somewhat obvious perhaps, but is that, you know, I think that everybody should stay current with, you know, the tools that are out there like chat GPT. There's another way to think about it is that if you're not using those tools, then, you know, your counterpart may be using their tools and improving their productivity, right? So like, you know, you want to be a little bit careful from your own, I would say, career perspective as an example that you're staying current with what the openly available capabilities are for like, you know, large language models as an example. Because you don't want to be put at a disadvantage, right? You want to, you know, so my strong recommendation is to stay current with what's happening with at least the widely available tools so that, you know, you can use them, obviously, where allowed, you know, to improve essentially both your personal life as well as maybe your productivity at work. So that's, I think what I would say to, you know, most people. Sound advice. Siddhi, thank you so much for joining the Everyday AI Show. We very much appreciate your insights. Thank you so much for having me. I really appreciate it, Jordan. All right. And hey, there was a lot there. Don't worry if you missed a little bit. Go to youreverydayai.com. Sign up for that free daily newsletter. We'll not only be, hey, a lot more AI news,

but just more insights and more depth

into what Sandeep was talking about.

Thank you for joining us and we hope to see you back for another edition of Everyday AI.

Thanks, y'all.

And that's a wrap for today's edition of Everyday AI.

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Go break some barriers and we'll see you next time.