

Microsoft's vision for responsible AI in the public sector

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You're listening to the ONVIF podcast, the show that explores the latest insights and discussions on global finance, economics, and policy for people who love staying informed about the rapidly evolving landscape of the financial world. Join us as we break down complex topics, interview key thought leaders, and provide essential insights to keep you informed about the evolving world of finance. Valentina, welcome to the podcast, we're really excited to have you. This is an unfettered podcast as part of our emerging series on artificial intelligence, finance, central banking, and AI use cases in financial operating models. Now Valentina is the public finance and public transportation lead at Microsoft, with over two decades of experience in business management, industry transformation, and digital innovation. And in her role, she helps governments and public sector organisations leverage technology to achieve their goals, and address challenges such as improving public services, enhancing citizen engagement and increasing operational efficiency. So Valentino, welcome to the podcast. Thank you so much, Julia. It's an honour to connect with you and own faith community, and share our perspective on AI. Definitely, it's a hot topic across all of the industries. And while AI is not a new topic for financial market regulators and financial sector in general, the big change today is the democratisation of access to AI tools that generative AI brought recently. Well, so let's start right there. Can you tell us a little bit about from your perch at Microsoft, what do you see in the AI space today? And can you actually just tell everyone, what is AI?

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Yes, that's a very good questions. And I will start by saying that we were extremely impressed by the huge interest in appetite towards AI especially after as I mentioned, that is antigen AI announcements and releases, as well as this organisation across the globe in scaling and adopting AI, I realise that there's a lot of myths and misconceptions still and confusion on what AI is and how it works. There are multiple flavours of AI, from machine learning to deep learning to cognitive services, such as voice and image recognition to generative AI powered by large language models, that allows natural language interaction with data and insights. So it's very important to understand all these flavours to understand the importance of data quality and data preparation, as this is the fuel for AI, whatever we're feeding in, and the way the

algorithms are being trained, will impact the results and outcome of the models. And the other aspects I would highlight security and governance, security, of course on protecting the development access, or information



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and the governance on overseeing the entire process.



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AI, it's meant to be a tool that supports the human our vision of Microsoft is that AI empowers human ingenuity not replaces the human. So Governance and Human oversight should be



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key foundation. So I'm very interested in in this and some of the points that you raised here. Can you tell us a little bit more about why, you know, the data quality matters so much what what what goes wrong if we don't get data correct? And what does it mean for us to have bad data? Yes, thank you for the question. This actually relates to risks associated with the with AI and I'll give some examples of



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what that means. So if we take the example of



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resumes and screening, resumes and more going into hiring process, if an AI algorithm it's been trained on the traditional historical way of hiring and fed with resumes of candidates that have been selected in the past, you might at some point realise that because traditionally, there was a bias towards white male of 40s and I believe this becomes a classical example. Now, across all industries. This is what the AI model will also do. So it is important to be mindful of biases and prevent discrimination. Another example in this area looks at the way credits have



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Bien, un loans have been



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approved for different demographics. And we've worked with companies such as Winston young EY, on helping the financial sector remove this bias in their credit, scoring and ranking,

and allowing for a third approvals towards women and men with smaller companies or bigger companies, and so on. So beyond the data quality piece, and this point about biases, right, and this notion that, you know, if we're training our AI systems on data that is in any way skewed, based on, you know, historical observations about the way the world was, that we may lead to sort of unequal outcomes, what, um, what are the other significant near term and longer term risks that you see in AI development and usage.

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The other risk that comes to mind and we've seen it working with governments and and supporting them in engaging with citizens on preparing elections, polling surveys, misinformation, it's one such risk, presented fake or distorted information and communicating that or leveraging that, to see the automated system powered by by AI. So it's extremely important to have in place the right mechanism that looks at the content at the sources of information. And I'll make this I'll emphasise this point, especially in the Gen AI intelligibility era that we're now

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it's extremely important to be clear on what are the sources? And are you looking to feed open data into a tool, knowing that mining the internet can give you incorrect? Not only fake information? Or do you want to isolate the data that you want to present to constituents to the citizens thinking of regulator or governments leveraging these tools?

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So it's extremely important to also explain how you come to the conclusions and outcomes. AI should not be a blackbox AI should be explainable. Right. And we've heard, you know, policy suggestions about right, so how do you deal with this issue of misinformation? You know, whether it's deep fakes, right? So kind of AI generated false videos, or photos?

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You know, how do you deal with that, and when I do is watermarking. So I'm sure that there are plenty of other

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approaches that come both companies and governments are taking to deal with these issues. But I'm curious,

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can you tell us a little bit more about what Microsoft is doing and you know, broadly, maybe

how Microsoft views its ethical and ethical commitments to AI, especially given this need and this palpable interest in really in investing quite a lot of money and time into developing AI systems? You're absolutely right as Microsoft, we're committed to developing and deploying AI in a responsible and ethical manner. And there are a number of principles that for a while now we have shared with a with the public. And these principles are fairness, AIC, systems should treat all people fairly. reliability and safety. It's the second principle AI system should perform reliable and safely, especially as we think of nationwide

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AI power systems or international cars. We are talking about financial sector and payments, digital payments systems, they go globally. So you can imagine the scale of such systems. The fourth principle will be privacy and security, as systems should be secured and respect the privacy. inclusiveness as system should empower everyone and engage people.

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Transparency, it's the fifth one. They should be understandable and transparent. And the last one that I would principle that I would highlight is accountability. People should be accountable for AI systems. And why we come up with these principles. We in order to ensure that AI systems are developed in a way that respects human values, promotes inclusivity and enhances people lives. There are a number of

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tools on top of these principles that we've made available. We have developed a responsible AI standard that sets specific actions

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guidance for teams developing AI systems. We have continued to invest in research. And we are contributing and advising both private sector and public sector on policy and governance.

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Not ohmic report we just published last week. So we've taken commitment to share how we are developing input transparency is our AI systems, what are the mechanism, the tools, the governance around it, and we published the outcome of the first year after we've taken that commitment in 2023. Last week, I would encourage everybody to have a look at the responsible AI transparency report we've published.

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So, you know, can you tell us a little bit more about, you know, what some of these methods are? In your chart? You've talked a lot about, you know, developing practical tools to address

are in your chart? You've talked a lot about, you know, developing practical tools to address issues like algorithm bias misinformation, right. I mean, can you tell us maybe a little bit more about what those are, how they've been received? How are they deployed? You know, I guess maybe, who is the you know, how do you deploy those those tools and those methods is that like, largely internal or is that directed outwards?

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It's first and foremost, internal, of course, because we are accountable for releasing the right AI technologies to the to the market. And as we assist customers in adopting when advising and supporting our customers, we also are looking forward to comply with all of the legislation that exists but also contribute to new developments when it comes to regulation and policy, because sometimes, there's new legislation that needs to be put in place.

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Examples of how we have one of the tools that we've developed, it can be as simple as an AI fitness checklist that offers guidance on what and how fitness can be embedded into development in the AI systems. And we look at it across the entire cycle from envisioning, prototyping, building, launching and evolving such systems. We have tools, and we make these the tools available. And there's possibly a transparency report that shows more about it, that we take the bias in artificial intelligence algorithm.

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This responsible AI standard also provides information on the governance because leadership must be committed and involved. And this comes from from the top with our chairman and CEO, Satya Nadella that has supported the creation of a responsible AI concert that oversee the efforts across the entire company. And we have representatives from our legal departments from the Technology Office, from the user interface in Microsoft Research.

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It looks convinced regularly brings together all of these representatives. And we share this with our customers.

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Okay, that's a very helpful response. So I am curious now, you know, you mentioned earlier as well, the private public partnerships, side of things as well, and maybe also the partnerships as well with universities. Right. So there was this new story, about \$3.2 billion investment in Wisconsin, for example, right to develop this data centre. And I'm wondering, do you see that as being a very important part of what AI innovation looks like? And what AI safety looks like? So, you know, where's there a role for public private partnerships, European?



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It's absolutely absolutely important, public private partnerships,



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in order to address the challenges of ai, ai, safety, and unlock the benefits that AI brings to market.



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And it starts with skilling.



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And edits education on AI. And it's also important because AI, it's no longer the characteristic of ICT sector, AI, it's embedded in the way we're living in the way we're working, no matter what industry we're looking at. So having developing AI skills becomes an important assets when you blame market



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in general,



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the private, the public private partnership is extremely important also on making sure that there's mitigation and mapping of potential risk associated with a cause if government does not involve themselves in oversight



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Right and regulating AI, you might have bad behaviours in the market. And we were discussing earlier about misinformation about deep fakes.



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There's a lot of



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digital crime, cybercrime, ai, ai related, and a specific risk associated to AI when it comes to

digital crime, cybercrime, ai, ai related, and a specific risk associated to AI when it comes to financial sector, we've we've, we've given the example of credit scoring, but also forecasting and issuing predictions on the market, right, that has immediate impact on financial services.

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Can can be another example of of that.

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Leakages of information,

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or

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unauthorised access to how AI models are being developed are other examples of risk associated to do AI, where it's extremely important for the private and public sector to cooperate in order to mitigate this. Yeah, well, I want to come back to those points that you're raising about AI and finance as well. Because that's something we've heard a lot about, obviously, here at ONVIF. But before we get there, you know, one thing that I think we often hear when we talk about,

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you know, technology companies working on safety, and risk is this idea that, you know, it's also, you know, it relies on a kind of self regulation. And these companies, whether it's Microsoft, or Apple or Google face, in a way, as you were kind of alluding to very strong market pressures to continue innovating and creating

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products,

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in some cases of blistering speed, and maybe to avoid this sort of encumbrance of,

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of government and regulation. So, I'm curious, is that something that you see in AI safety,

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you know, on the private sector side, because at the same time, what was also notable to a lot of people about AI regulation was this idea of, we had a lot of tech companies showing up to Congress and saying, Hey, look, we need AI regulation here. So I'm curious how you view the sort of private sector, you know, commitment to AI safety, and also, what some of the areas where we really, you know, we may need regulation might be,

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yep. Important. Not an easy question, Julian, for sure. In it is about partnership. That's the key word in the public private partnership, because we will not have all the answer. And we need to develop together some of those answers. And we need to learn from each other.

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If innovation might be easier to achieve in the private sector,

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government has a wider experience in protecting people, the well being and ensuring a safe, thriving society. So both they come together, we have over the five point blueprint to address the current and emerging AI issues when it comes to public policy, law and regulation. And this is a blueprint

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that we offer, considering that it will benefit the broader discussion, but it's in no matter finish point. I mean, it's open for improvement as we connect with the different governments and organisations the 5.2 Blueprint, I'll detail it, the first point refers to implement them build upon new governmentally led AI safety frameworks. So implement and consider this. The second required safety brakes for AI system that control critical infrastructure. I think this is an extremely important

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point for for government, develop a broader legal and regulatory framework based on the technology architecture for AI. So understand and learn from technology, what the possibilities capabilities are, what the use cases are,

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as this is being leveraged in the private sector, and then bottom up, develop a broader legal and regulatory framework. But what transparency and ensure academia

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and public access to AI it's granted.

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And I see the role of academia extremely important in doing the bridge between the private and

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public sector

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in the US are motivated by innovation.

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Not by

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Can you add interest, so they definitely are extremely trusted partners in the equation

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and pursue new public private partnerships to use AI as an effective tool to address the inevitable societal challenges that comes with new technologies. And these new public private partnerships can be as easy as hackathon or public consultation, or research.

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Projects and prototypes.

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Yeah, absolutely. And also, we've seen these, you know, kind of, as I was alluding to earlier, these very cool engagements with, you know, companies like Microsoft, or even Nvidia and public sector institutions mediated by higher education. You know, there's also the example the University of Florida creating this kind of AI cluster with the support of Nvidia. And using that as sort of a way of generating AI investment, AI workforce complementarity in those regions. Right. Ideally, I mean, we still, of course, need to see how those policies actually play out, but they're very cool sort of regional investment policies. That's for sure. Um, what I'm wondering, you know, we're definitely it seems as though we're seeing a lot of interest in these kinds of public private partnerships right now, both on the private and public sector side.

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You know, again, in the United States, there's these National Science Foundation, AI Institute's that are popping up, and they're very much looking for these kinds of partnerships with private institutions to generate AI activity, more diffusely. But I'm curious, what do you view as you know, the biggest hurdles to establishing these kinds of partnerships between corporations and governments?

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Yes,

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I will go back to the scaling and understanding what they are is and how AI works. So once that's clarified and removed from

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as a blocker, because sometimes it can be a blocker. So there's a lot of misconception around it.


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The other aspect looks at the objective, the common identifying common objectives that the private sector and public sector would have. And this is to generate value, to improve on competitiveness,


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and create





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new business


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and also our revenue base for for governments. So approaching it from from that angle, definitely will, will help us improve


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AI standards, and AI regulation, important in the journey, and even if they don't currently exist,


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today, consultations and cooperation will definitely help

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improve. In speaking about this consultation, it needs to be an ongoing process, where

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we take learnings from the past period and we improve for the future. So, you know, building off of that, I'm wondering

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if you can maybe give us a prelude into the kinds of, you know, areas where you think there's a need for more AI policy or governance, work or research. Right. You know, we've talked a lot about misinformation. We've talked about

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biases in data, and I suppose a little bit about worker reskilling to, which is definitely a huge area of interest, but personally and for for ONVIF to

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and I'm wondering, you know, where you think there's maybe a need for more for more work, maybe it's been covered a little bit less than some of these other topics. Going back to the to the risks, I would add to the to the list on top of bias discrimination, misinformation, privacy

concerns, security,



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as well as maybe the wider topic of concentration of power, dependence on AI and ethical dilemmas.



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And we see good examples of countries that are



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defining what the framework of developing AI and adopting AI should look in the country. When I go to countries like Norway that has released



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an AI policy



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us



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that it's asking



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AI



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develop



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I want companies to share the way they're doing it. And we're fully committed to,



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to share our own practice. And that's how the first report was released last last week,



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it is extremely important also to contribute to international forum forums, such as Opie, as well as European Union, OECD, that are



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consulting across countries, and coming with guidance on regulation and standards.



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I'm very interested in the third point you brought up about concentration of power. Can you tell us a little bit about that? What does that entail? What does that mean? Um, I used to make a parallel between this and the science fiction movies, we've we've seen all of us at some point where you rely so much on technology that generations in the future, you forget to ask the right questions and no longer question the outcomes. So you, you outsource, and you move into the technology system without human oversight, a lot of the processes and work so as if we're outsourcing our own intelligence, a little bit. Exactly, exactly. And



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yeah, well, I suppose you could see elements of that already in, you know,



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are still limited, huge limitations of it. But emerging usage of AI in research, for example, using chat GPT, for example, to help support coding or developing research designs, or scanning the web for relevant academic papers, for example, right, yeah, just to take that as one micro example. But you know, we've also heard



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and, you know, I mentioned, I want to get into the kind of finance and finance side of things just to get your take on that, too. But we've heard from, you know, central banks about how some of them are using AI to support their operating models, whether that's getting a sense of consumer expectations, whether that's doing macroeconomic modelling or projections. So, you know, there is there does appear to be some element of at least involving AI systems more heavily in these kinds of core cognitive tasks that,



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you know, many of our institutions are doing. So, that's, that's a very interesting point. I, you know, I do want to ask about the privacy and security piece as well. So, you know, we hear a lot at on Fifth about



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privacy and security issues with relates relation to payment systems. And, you know, frankly, the financial, the digital financial system in general.



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To what extent are AI risks related to privacy and security new? Or are they instead just accentuations of those other risks? You know, what does that look like?



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Yeah,



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I just come back a bit to the first point you've you've made and the fact that AI becomes prevalent across all of the industries.



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And it's a good thing, there's so many benefits in terms of efficiency, productivity,



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accessibility inclusion, if AI is done in the right way, and it goes back to the data, because that's the fuel for for AI. And now I'm making the bridge to security and privacy. So depending on the scenario, on the use case, on the beneficiary, at the end of the system, do we need to train data on



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the information that's anonymized? Because we need to understand the behaviour, rather to understand the specific individual that



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you consider the so it's a matter of



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use case of purpose. And not all of the challenges or all of the questions will need an AI answer AI based answers. Right? That's, that needs to be understood from the very beginning. So there are two questions that I've heard one of our customers mentioned, what's the use case? And what's your data set in order to make sure that we come up with the right solutions in the in the right way at the end of it? Security? Whenever we speak about data whenever you think about the digital



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platform and system security and cybersecurity are essential you want to protect against bad actors against attack, you want to prevent data leakages, you want to ensure the right level of access, depending on the on the use case, depending on the owner data set according to the role and function of users that are leveraging those systems. We want to you would want to also control the data sources being considered back to that example of I want him as a government and financial market regulator, I want to make sure that the answers I provide to the



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private sector, they are respecting at least the legislation, the existing regulation. So they want to train my AI models on open data, I want to train the AI models on Secure Enterprise level information that I own internally, within my organisation. Because if bad things happen, this will result in a case in court




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thinking of audit and fighting financial crime, so you want to document it and put it in the right way. But also you want to, first and foremost, prevent this scenario to happen.





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Yes, and of course, this sort of privacy risk, security risk is extremely germane to the financial sector. And you know, we've been hovering around it a little bit topically, but I do want to ask you,


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you know, what are the use cases that you see in

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AI and finance, you know, in terms of maybe their clients asking you for this kind of support? And maybe just broadly, what are those use cases that you see? And of course, connected with that, you know, how do you see some of these risks that we've talked and talked about playing out in the financial sector? Yeah, excellent question. So, if I start with a general AI in mind, this natural language interface that it's it's now being enabled between the customers and the financial institutions,


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immediate use case and adoption was in the contact centre. So, the generative AI enabled for natural language interface between the customers and the financial institution. So contact centres have been among the first one to adopt this.


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It might be also under the format of service


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banking. The other use case we've seen is understanding financial position of organisations


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and assessing the associated risks that might exist either financial but also risk associated to sustainability ESG compliance, the use case its forecasts prediction, in simulation, what if scenarios


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are considering different


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KPIs, thinking of recession, thinking of


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employment and employment insurance


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scenarios, as well. So those these are the top three more and more now we see adoption of AI under the former to copilot type technology,

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accounting, processing, account receivable, accounts payable, classification, reclassification of accounting records,

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automation of processes procurement process being one because that is a lot of documentation that needs to be prepared, or requirements defined, but also processing at the end of the process, all the

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bids submitted and evaluating a scoring dose, or automation of

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invoices, payments received and processed.

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That's, that's very helpful. That's certainly in line with with some of what we've seen, and also this huge emphasis that's been placed on unstructured data as well. Right, this deployment of qualitative text into formalised structured datasets. And so, but you know, connected with that, right, like, you know, what are the what are the risks that you see there, you know, and to what extent do you see these institutions, you know, whether it's Microsoft, whether it's the clients themselves, those financial institutions, or the regulators, whether it's the you know,

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HM Treasury or



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sec how do you see, you know, to what extent do you see them as



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you know, getting involved this from a regulatory perspective?



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Absolutely, when it comes to this, there are a number of what is either financial or operational



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over legal regulatory risks on financial data take the example of deposit in inaccurate deposit trends prediction due to float AI models and that will have an impact on misaligned liquidity management strategies.



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Operational Risk fraud associated with deposit and withdrawal processing, if the the first scenario are we being impacted by the flawed AI model, this will have an impact on liquidity and will create weaknesses in fraud or fraud associated to that



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we discussed about the fair lending regulations, so, that bias credit scoring model used



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for other than transaction not being detected, because there is a lack of security and




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privacy mechanism in place




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data liquids and data security breaches it takes to the security aspect, but also it speaks about the governance and educating the users internal and external on on the right behaviours


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to have


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a trade finance documented or verification


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when you are mentioning

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unstructured data analysing documents or analysing biometrics like voice, and so on. And that will have impact on delays disputes, trusted origin and financial losses.

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So, you know, just coming to, you know, the last 1015 minutes, we've got left of this, I want to you know, just look a little bit more in a forward looking way at the future of AI governance and regulation. And I just want to ask, you know, it's early days right now, in AI, governance, AI safety. We have national AI safety Institute's that are emerging, whether it's in the UK, whether it's the US, looks like France may be developing one as well. Japan has won.

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You know,

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what does it look like for governments to foster AI innovation, while also making sure that there's appropriate oversight, appropriate regulation? Are there particular actors or institutions that you see as doing an especially good job of getting that balance? Right.

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Thank you so much for the question, Julian.

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... ..

AI, becomes, I would say, now synonymous with digital transformation. And as we've seen the growth in importance of Chief Data Officer, Chief Security Officer,

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I think there's an the need of such a role within any organisation government included, there are some countries that have created AI ministries.

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If I think of Middle East, there are governments that have created a community of champions across the different levels of government from central to local, regional governments that are consulting and working on AI related topics. And to your point, the cooperation with the private sector cooperation with academia and extremely, extremely

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needed, because it will inform the government, it will ensure that there's no burden that

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added on the on the private sector that will prevent innovation.

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So funding towards research

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enabling in developing an ecosystem, AI ecosystem that will contribute to the competitiveness of the country to attracting talent. It's another format that I see extremely important.

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Okay, and, you know, and on the user side, right, for those of us that are engaging with the technology may be just beginning to learn about what AI is, maybe we've created our own GPS on TPT and that's sort of our first

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To,



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you know, really engagement with this technology and our understanding of how to do prompt engineering and so on,



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you know, what can you say to individuals, you know, beyond just tech experts who are, you know, working with these tools, whether it's, you know, especially people in finance, right, given our focus here, a dump of



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what, what would you say to them as a way to stay up to date on technology, the tools, the risks, and just really the state of where this exciting new technology is going.



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I would first mention that this



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approach of Long live learning, it's the reality. So keeping up to date with the technology, innovation, as well as any innovation needs to be a behaviour we maintain throughout our entire life.



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Speaking about AI, understanding what AI is, is important, I'll keep repeating this is the hunter mantra, I would say across the this discussion.



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And there are a number of great trainings on LinkedIn, starting with Introduction to Artificial Intelligence. If you want to have a



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summary of what responsibly I practices, I would recommend everybody to consult the Microsoft responsible AI portal, and report that you will get a crash course on AI responsible AI. And you will see also specific examples, practical examples based on the implementation

projects and learnings we've had across the globe. And firstly, identify and subscribe to an Industry Forum centres on faith that brings together representatives from both worlds government and private sector. And sometimes that can be at the country level. But in our context, I think international forums are extremely important. Right? You know, and honestly, for a long learning point, right, we have so many tools available now to study these topics, acquire new skills, you'll get a better understanding of what AI is. And certainly there's a lot of folks online that are offering



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these kinds of crash courses on AI, are there particular skill sets that you think are especially valuable, right down as AI emerges or becoming more valuable? Are there particular types of lifelong learning



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that you encourage people to get involved in right now? I love this question.



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Critical thinking, I think it's the skill required.



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Because



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you need to be able to assess what's presented in front of on front of you, you need to be able to ask the right questions, and to test and validate the outcomes that they will bring. So again, critical thinking, it's something that



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we should consider more than I wouldn't necessarily make a parallel between AI and mathematics or



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a AI now it's pervasive, and it's natural language, so anybody can leverage it can use it, as long as they understand how to do it. Yeah. All right. Well, look, I want to conclude with one final question, kind of a fun one, which is just predictions for 2024. What do you what do you expect to see? Or what do you think listeners should anticipate in 2020? For



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an AI innovation, you know, AI governance, what should we expect? I believe that we will see more and more clarity around AI when it comes to the regulation and policies.



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And I also



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see a bottom up approach, where, because democratic democracy, democratisation of access to AI tools, all of us were where you were using it,



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and there's lots of of learning, and then there will be also a lot of pressure upwards in order to unlock the benefits associated if something prevents that the need of consultation and cooperation. Yeah. Will will be will continue to be there. Yeah. And hopefully it'll catch up to you five, sometime in the future as well.



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Valentina, thank you so much for joining this podcast. For listeners. This is again part of our fifth series on artificial intelligence. With a focus on finance and monetary policy. You can



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Read all about our work at our website. And



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we look forward to covering many more of these topics in the near future. Valentina, thank you. Thank you so much, Judy. And thank you. And thank you for joining us for this edition of The on Fifth podcast. If you found today's conversation engaging, make sure to stay tuned for additional thought provoking discussions on artificial intelligence, Central Bank, digital currencies and digitalization of finance by subscribing to our channel. Stay connected of the latest developments by following us on our LinkedIn page on Fifth digital monetary Institute.