



AI Ignition

Ignite your AI curiosity with Kay Firth-Butterfield

Applying AI ethically

From Deloitte's AI Institute—this is AI Ignition, a monthly chat about the human side of artificial intelligence, with your host, Beena Ammanath. We'll take a deep dive into the past, present, and future of AI, machine learning, neural networks, and other cutting-edge technologies. Here is your host, Beena.

Beena Ammanath (Beena): Hello, my name is Beena Ammanath and welcome to another episode of AI Ignition. Today, I have the pleasure of speaking with Kay Firth-Butterfield. She is the head of AI and machine learning and also a member of the executive committee at the World Economic Forum. Welcome, Kay. It is great to have you on today's show. How are you doing?

Kay Firth-Butterfield (Kay): I am well, thank you. How are you doing in these terribly troubled times?

Beena: You can only look at the positive things at times like this. I am healthy. My family is healthy. That is all you can hope for. And we are busy at work, at school. So I'm doing good, considering everything else that is going on in the world.

Kay: Yes, as you say, we need to look at those positives. Yes, indeed.

Beena: Kay, I am so glad to sit down with you and have this conversation. You have a very interesting role at the World Economic Forum. We have interacted a few times. And I am just curious. What does a day in the life of Kay look like nowadays?

Kay: Well, obviously very different from what a day in the life of Kay looked like this time last year, because this time last year I had just come back from two months of being in India and Colombia and Russia and Switzerland and the UK, and speaking at some really interesting events like, for example, WIRED. Now, I'm still speaking, so I'm still doing lots of speeches and these wonderful events like this, but I'm doing them from my home office and not having to go out at all. And actually that's absolutely wonderful, because it means that we can have these conversations. I can speak in Australia one day and Europe the next. And so actually, I think that it's very empowering, because many more people know about the things we're actually doing than could possibly have known if I was on a plane all the time

going to various places. So I think that one of those things that a day looks like is very often a speech or an interaction like this. Another piece of a day would be the envisioning and leadership. So what are we doing as a team and where are we going. Empowering all the people who work with us to really do their best in this very interesting and important area of AI and AI ethics and AI for good. And I think the third thing is, I'm always looking to collaborate. We want to make sure that everybody's best ideas are out there, and we're not just reinventing the wheel when we're thinking about what we do next.

Beena: You work across several countries and several regions and several industries. AI is such a broad topic. What are some of the exciting things that's happening in this world of AI that you are excited about and that you are really focusing on?

Kay: Certainly, so we tend at the moment to do more of the foundation-building pieces. So you'll often hear me say, we can't go on and build great things with AI and use it for all the beneficial purposes we want to, unless we make sure that we deal with building it with some firm foundations. So making sure that there's ethical or just problems that we see, like bias or explainability, those sort of things we deal with now, so that we build a house on foundations of stone. So that's really what a lot of our work is, and you're right, we have offices doing this work now in five continents and we work with governments, businesses, nonprofits, philanthropic foundations, international organizations, and of course business to make sure that we've got the right stakeholders in the room to really think about it, so that governments don't regulate where actually they don't need to regulate and soft law would be better. So, for example, we did some work with the United Kingdom where we worked with them to create procurement rules for artificial intelligence and also that workbook that the procurement offices actually need in order to work out what high-level principles are about. And that came into force in the UK in July, and now we're working with the US, with the government of Australia, with some other governments in Latin America, and the MENA region. So that it's about making sure that what we do is so well thought out and has so many stakeholders that it's transportable to different places.

Beena: What you described about setting the foundation, that is so important. Now, what do you see from an industry lens? Obviously, you look across all these different industries. Do you see certain industries ahead in getting the foundation right or are there still a lot of opportunities to improve on those foundational aspects of AI?

Kay: I think that the true tech companies and of course the professional services companies, like yourselves, are really ahead in the thinking around ethical AI or responsible AI, or just as I usually put it, the problems that come with using some of these tools. And that's because you've had to be, you were the first movers in this market. And so now we're seeing other companies, and I do believe that all companies will eventually be AI companies, but now we're seeing some of the other companies that are using artificial intelligence perhaps in one or more vertical, seeing that just as it might be damaging to the brand value of some of the other companies that have already traveled this journey, it's also potentially dangerous for them as well and so then they are entering into, well, what do we do next with this ethics piece?

Beena: Yeah, and I think one of the ways I found thinking about it, and tell me how you think about the impact of technology, because if you think about it, there are three parallel streams moving along, growing at varied speeds. There is a core technology itself, whether it's quantum computing or the next wave of deep learning algorithms, there's a core technology that's being developed, and there is the

applications of the technology, which is a second stream which is across all these industries and different functions where it's being used. And then there is a third part, which is the consequences, the risks, where we think about ethics. When you apply a technology that is still being developed and you apply it in real-world use cases, obviously there are impacts that nobody has thought about, and so it's great to hear about your focus on ethics and really the World Economic Forum. It's amazing to see the kind of work that you're doing with ethics specifically and really coming up with those guidelines, because that's a playbook that doesn't exist today. Are there any industries or are there any areas you think that AI will not touch or will not have as much of an impact as, say, some of the other industries like we've heard financial services or health care, almost every industry seems to be impacted by AI. In your perspective, do you think there will be industries or jobs that will not get impacted by AI?

Kay: Yes. Well, I think it depends upon the timeline that you apply to that question. But just if I can, before I answer that question, I wanted to come back and say, I agree with you entirely about those three streams with regard to AI that you just talked about. And I think that every company will at some stage be in one of those streams. And also, we have to decide as a world what we want to govern and how we want to govern it. So do we want to govern applications, for example, and do we want to think about high-risk examples, so the obvious one there might be facial recognition. We might say facial recognition used in law enforcement, we see that as a high risk and so we really need to look at that more carefully than facial recognition for cows, which is actually happening in India to help with agriculture. And so, I think there are very careful gradations that we have to think about. It is a nuanced place to be working, but then going back to your question, I always said that I felt that my hairdresser would be one of the last people to lose her job to automation. And then during lockdown, I was reading something in one of the newspapers, online of course, somebody had created and didn't do a very good job, but somebody had created a hair-cutting machine. It wasn't obvious whether it was autonomous, but it was certainly a robot cutting his hair. So that's why I said I think it depends upon the timeline, because at the moment our robots are not terribly good at manipulating things, but obviously over a longer period, even those jobs that seem very safe at the moment I think will be automated. And so, ballet, that was one I was think about, ballet and maybe opera and singing, we might not want to go and listen to and see robots dancing, but then again maybe we will.

Beena: There's so much to unpack there, and at the end of the day necessity drives a lot of innovation. I'm going to share this, but I ended up cutting my own hair last week and I think it turned out okay, and I might never go to a hairdresser or maybe once in two to three years.

Kay: I mean, certainly, it turned out okay. With me, I just let mine keep growing and growing and growing.

Beena: We certainly see that. It's fascinating about the singing and dancing robots. I think the creative arts are less likely to be impacted, but one interesting application that I've seen is where they are trying to recreate the voices, especially of singers who have passed away. Like if Frank Sinatra can sing some of the newer songs. I mean, I love his voice, not everybody is his fan, but it would be great if AI can continue to release new songs and the whole ethical implications around that, that's where this whole topic of ethics and the consequences of the application of technology is fascinating for me. And I know you focus a lot on the governance aspect and you think a lot about ethics as well. What would be a good, structured way to think about ethics? What are some of the best practices that you've learned,

what are some of the approaches that you've seen that actually work and encompass the different aspects of ethics.

Kay: Yeah certainly, I think maybe we just need unpack Frank Sinatra's voice. I too love Frank Sinatra, but I wonder whether actually just having him sing new songs is a form of deep fake and we should be thinking about that. And also, I'm obviously a bit of an opera buff, that's why I brought it up, but would I want to listen to an AI-enabled Pavarotti singing? I'm not entirely sure. Yeah, it's something that—it's almost in that uncanny valley feeling. Anyway, back to the governance and maybe that's a governance issue in itself, and probably one would have to go to the trustees of an estate to help them think that through. So, yes, what are best practices. I think that the best thing is to make sure that if you're a company or a government, you have a plan for you use of AI. And so, I have certainly been saying to countries you really need a national AI strategy, because a company like Deloitte would not plan to bring in something like artificial intelligence and use it without having a strategy behind it. And I think that should be the same for countries, especially because countries are going to have to think about how do they use it, how does it interact with their systems, and are there issues like the use of facial recognition in law enforcement that might be a step too far for either the country or their citizenry. And so having that sort of strategic thought, so for countries I think it's really important, but as I've said, for companies too. So one of the things that we did was create a toolkit for boards to help those directors understand what AI is and also to understand what it means to have oversight of AI applications that are happening in their companies. And of course many directors really didn't understand this new technology. So we hope that's—we say that that's a version of governance, but it's there to help so that those directors can do a better job of governing their companies. And now of course we're moving on to the C-suite version and we're delighted to have Deloitte's help, thank you so much, in that C-suite version of the toolkit. And whilst I'm saying thank you, I mentioned the procurement work that we did with the UK government, that also was a partnership with Deloitte. So it's wonderful to have you not only talking about it and thinking about it, but actually working with us on some of these governance issues.

Beena: Yes. I think because of our audit DNA and advisory DNA, putting trust at the center of everything that we do, specifically in AI, it is so crucial. So we actually developed a framework that looks at AI ethics holistically and cuts across all the different industries. For example, bias might be important when you are looking at the consumer space, but bias may not be relevant if you're looking at predicting when a factory flow machine might fail. So you have to think about the different consequences and ethical implications based on the use case. As you were saying for facial recognition, such a great example, AI is so context specific and the nuances, the ethics around using AI depend on the application and the use of AI. And we love working with the World Economic Forum because it gives us a preview into driving a broader impact because I personally do believe that for AI to reach its full potential, we need to have that foundation right and ethics has to be a part of that foundation. And you mentioned the work that we've done for C-suite and the board members that we are working on. What would your advice be to companies who are very early in their AI journey or even countries who are still very early in their AI journey, who don't have an AI strategy, who are still figuring out what to do, how could AI be used in their business or in their day-to-day work. What would be your guidance?

Kay: Well, I think my guidance to a company would be, first of all, read the tools that we have produced, obviously things like the toolkits, but also if you're thinking of using, and a lot of companies are thinking of using AI in talent acquisition. That can get you in a lot of trouble if you don't do it properly. We all

know the story of the bank that ended up with its algorithm only looking at white men from a certain university or couple of universities, because it had been badly trained. We need diversity actually in our companies and we can do some really crazy things and get it very badly wrong if we don't look at each place that we want to use AI. So don't be, I would say, don't be pushed with the "everybody will be using AI" or "you have to get AI." Make it a thoughtful choice to buy artificial intelligence and learn about the ethical issues beforehand, and think about where are you going to use it and how you are going to use it and how you are going to build this from foundation. So maybe you want a chief AI ethics officer, for example, and look to companies like Deloitte and others who have already navigated some of this work, so that you can draw from those tools and draw from the forum's tools. So I think that would be my best advice to companies and with countries, yes, now we've got sort of in the 30s and 40s number of countries with strategies, so they are examples to learn from. We wrote a white paper, which actually tells a country how to draft a national AI strategy. And also, we're beginning to see countries say, "Okay, we have this ethics chapter in our national AI strategy. How do we operationalize that?" And so we've been working with India to think about how to operationalize it. So go and—it's out at the moment for public review, go and review it, and see where your future might lie.

Beena: Kay, you've had an interesting journey to get to the role that you are in today. Can you share a little bit with our audience on how you got to the current role? What's your background?

Kay: Well, I am the living example that you can have more than one career in a lifetime. And I think that that's something that our children are going to have to understand and prepare for, so that is sort of lifelong learning. In fact, my daughter is a pilot with the US Air Force, and I keep telling her that her job is going to disappear because of AI, so that too will be a multifaceted career. I've started my life as a barrister, that's the wig and gown lawyers in England, and really thinking about human rights and children's rights. And so have always been worried about the state of the world, really. I was then invited to sit as a judge at—there is an interview process and things like that—and I didn't want to be a full-time judge. So at that stage I thought to myself, well, what am I going to do with my life? And I was fortunate enough to be asked to be a professor, and I taught law and international relations and really became immersed in my research in thinking about what AI would look like in the geopolitical space and in the human rights space, so that brought by careers together very neatly. And then was one of the first people really thinking about this, and so I was invited to be the world's first chief AI ethics officer, and that was in 2014 when it was still very rare for us to be in the space. And then of course I moved to the forum in 2017, having already set up a nonprofit to think about how one audits algorithms with some friends in Austin, Texas.

Beena: That is fascinating. And I think AI creates a lot of jobs, but we hear a lot about AI displacing jobs. And one question, given your career path and how you got here, what's your advice to students who are studying today who are in colleges or high school, how should they think about a career in AI.

Kay: Well, I think first of all they should think about a multifaceted career like mine, so don't expect that the career that you get into now as you come out of college is going to necessarily exist in 10 years' time. So I think that actually, we've spent a lot of time thinking about STEM, but we also need to make sure that we have that humanities piece in because we have to ensure that we bring what we are educating our children is around critical thinking and analytical thinking, and that lifelong learning so that you can be a scientist and you can be a historian. So much more of that combination because

frankly none of us have got any idea what the jobs of the future will look like, but you are looking at one of the jobs of the future. My job didn't exist six years ago, and maybe yours too.

Beena: Mine did not. But I also think because of AI's needs for domain experts, I think this could, AI could actually turn out to be an equalizer to get real diversity infused in tech and primarily in AI because we're going to need more and more domain experts who understand AI and need to be part of the AI journey. And you are the living example for that. The combination of skill sets that you had, the experience, and then tying it with AI and bringing that unique lens is how we make progress. I do think AI can be an equalizer, through lifelong learning we are going to get more and more diverse perspective, at least that's my hope. I'm an optimist. So I hope this can be an equalizer for us to get diversity into AI. Like both of our jobs didn't exist 10 to 15 years ago. I certainly didn't think that AI would get so real and accelerate so fast as where we are today. What do you think that a new job that has been created in the past 10 years that actually caught you by surprise?

Kay: I suspect being a driver of a driverless car, that seems, I mean it's obviously critical, but it seems strange that you are sitting behind the wheel of a car that is driving itself. So as I say, absolutely important for the governance, but just a slightly curious career.

Beena: Kay, this has been a fascinating discussion. You are clearly a visionary in this space and paving the path for so many to build AI responsibly. I've really enjoyed our conversation. How can our audience stay connected with you and follow you? What is the best way to stay engaged with the work that you're doing?

Kay: Well, certainly thank you so much for having me. It's been a pleasure and one of the most important things is that here we are two women working in AI, and so it's a pleasure to have been working with you. And I think just picking up on what we said last, it is so important that we diversify the people who come into artificial intelligence, and that's obviously one of the ways that we will begin to deal with the issue of bias. So keeping in touch is always wonderful to keep in touch with people who are inspired by anything that we talk about, and so the best way is AI@weforum.org, so that is the AI team that I lead at the forum.

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