All about AI: Should we be concerned about artificial intelligence?

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All about AI: Should we be concerned about artificial intelligence?

Intro [00:00:02] Welcome to OECD podcast, where policy meets people.

Robin Davis [00:00:07] Machine learning or artificial intelligence can be traced back to the 1950s, but really leapt forward in the last decade or so thanks to more powerful computing. Some place their hopes in it to solve complex problems quickly or help people to work more effectively. Digital platforms from Facebook to Netflix use A.I. to work out what users want or to make games more challenging. A.I. is at the wheel when it comes to driverless cars and is used by farmers to monitor crops and the police to solve crime. It has promise in health care too, including to better detect COVID-19. With such benefits, what's not to like about A.I.? Well, there are quite a few concerns, actually, in part because of AI strength and also because we too are learning about his potential. Could I go too far as machines teach machines and even learning human emotions and tastes? Yet with very little control by human beings, A.I. is already replacing jobs. But could AI even end up outsmarting people altogether? As the great Stephen Hawking warned, policymakers are now taking AI seriously to safeguard public interest and to develop AI sensibly as well as intelligently. I'm Robin Davis and you're listening to OECD podcasts. There are many questions will be asking about A.I. in this podcast. How can I technology's help in the health emergency? What role can at play in finding a vaccine? How can I help the economic recovery and what can we do to make sure the AI is trustworthy as we rebuild? A little later in the podcast, we'll hear from Kathleen Walch of Cognitive Ética and Jack Clark of Open A.I.. But first, Shayne MacLachlan caught up with Audrey Plonk, head of OECD Digital Economy Policy Division, to tell us a little more about what A.I. is and why it's fast becoming such a burning public policy issue.

Shayne MacLachlan [00:02:10] Thank you so much to Audrey for joining us today on OECD podcast to discuss the role of artificial intelligence during the current COVID-19 crisis. So we've seen that during the crisis, there's been a real great digital acceleration and digital technologies such as artificial intelligence being used to combat the global pandemic. So Audrey, what are some of the ways that AI's being used in the current COVID-19 health emergency?

Audrey Plonk [00:02:39] Thanks for having me. It's really great to be here. Well, as you say, in response to the pandemic, technologies as a whole have played an important role in responding and recovering, but specifically to AI applications and how they've helped to fight the pandemic at different stages. We look at four main areas. The first is how AI has helped to detect the virus, diagnose the virus and help people know what the status of their situation is with regard to the virus. The second is for AI to help prevent or slow the virus's spread by doing predictive modelling around contagion, by helping to surveil and trace where virus outbreaks have come. The third area is in helping us respond specifically by looking for, for example, a vaccine for helping people use technology in their daily lives, and then finally, as being employed in the recovery to improve early warning tools to improve our understanding of the future and how the virus might move forward.

Shayne MacLachlan [00:03:46] How are you at the OECD helping to build awareness, particularly with policymakers and the role that AI can play in the crisis and in the recovery?

Audrey Plonk [00:03:57] So in terms of data, we've developed a COVID-19 tracker with live data on coronavirus related research publications. The tracker allows you to follow COVID-19 news and events as they happen. It can be filtered by country and one can track the evolution of the pandemic by country.

Another stream of work in terms of data is coronavirus related research, and there's obviously an explosion over the past few months. We explore collaboration within and between countries and institutions there.

Shayne MacLachlan [00:04:30] So we've heard about the importance of A.I. in the crisis. But how can we make A.I. safe regarding data and privacy? But as well, you know, in terms of transparency and being trustworthy for all actors?

Audrey Plonk [00:04:45] Well, the Al OECD air principles can give a sense of direction and coherence to a policy area that is still very nascent and holds many difficult ethical issues. This was the driving force behind their development back in 2019, which seems like a long time ago. Now, policy tends to lag behind technology, and we see a huge amount of effort to get ahead of it right now within the context of national policies, a few important areas that we tend to focus governments on, and they're reflected in our recommendations. But they include things like investing in AI research and development. This is critically important, and most of the national strategies that we look at have some element of this fostering a digital ecosystem for AI, shaping and enabling a policy environment for AI. So, you know, this can include a wealth of existing and related policy topics such as data privacy or cybersecurity, just to name a couple. Building human capacity and preparing for labour market transformation. So the question of how AI will change, how people work and how people live is is extremely important. And then finally, international cooperation for trustworthy A.I. And so we've seen a significant amount of work around the world to try to understand that some people call it ethics. Some people call it responsibly AI, trustworthy AI. But essentially, we're trying to get to this question of since it is so global and our interconnected systems are so interdependent. Can we build common notions of what it means to build trustworthy and cooperative A.I.? And those are some examples of where countries have been moving and where we see a lot of attention? Rightly probably so is around. How do we explain these systems to people? How do we audit them? How can we make them transparent and what does accountability look like? Is it strict legal accountability or are there other ways of holding actors accountable? And then who in the supply chain are you holding accountable? Is it, you know, the coder or the algorithm development, the data source, the platform designer, you know, the implementer at the end. So it's a complex ecosystem and there's a significant amount of cooperation and learning that can be done by working together as an inter-governmental and international level.

Shayne MacLachlan [00:07:10] Let's turn our attention to the issue of data and dig down on data a little bit. Why is privacy such a big issue with A.I.? And when we're talking about official intelligence and is this more important than with other types of technology, for example?

Audrey Plonk [00:07:27] Well, I think privacy is becoming more important as technology becomes just more integrated into everything that we do. And as we have more devices that generate more data and more data that is transmitted over a network in a digital format that can be used for different things. So I think people around the world are starting to become more knowledgeable and understanding of how data are generated and concerned about where they're going. And I think we saw in so many ways COVID-19 was the perfect test case for, and I say, perfect and not in a positive way, but perfect test case. And in some of the fears that the privacy community and the data protection community has long discussed about sharing the sort of very personal sensitive data. So I think there is this concern with regard to COVID specifically and whether or not you have have a virus. What the government will do with it, how long they will keep it, who it could fall in the hands of in some countries, whether or not you can get medical coverage depends on your state of health. And if you're going to use, for example, track and trace technologies to

track and trace the virus. So primarily geo-location data where you are when, and there's lots of scenarios that one has can imagine and many people have of how that kind of information could be misused or used against people. And so what can we do to continue to use data but also assuage these concerns and protect people's individual rights? A lot of the policy response to date has been to try to control data, to try to keep it within national boundaries, to try to keep it from being shared. And what we really see, both with AI and with things like track and trace technologies is that that's a very limiting policy response because in reality, if we want to recover from something like COVID, we're going to need to share data across borders.

Shayne MacLachlan [00:09:29] What you just wanted to ask you why you think people fear air and the whole issue of regulation and further regulation on AI? Will it work? Who should we regulate? Some actors say, well, you can never regulate innovators and scientists and those that kind of front of AI. What are your thoughts about regulation and the issue of AI?

Audrey Plonk [00:09:55] To me AI is a is a compilation of the history of technology and computing up until the point that we're living in today. And so it's not a it's not a binary thing. It's not a thing. It's not something you can buy off the shelf. It's a it's a suite of computing capability that will be used and implemented in an already is. But we'll continue to be use it implemented in many, many different ways. And so to me, the idea that you can't regulate it or shouldn't regulate it because by definition, regulation harms innovation. It's an old idea and we have to put it aside. It's too important to how we how we conduct our jobs, how we teach our children it's we really need to to regulate it. And I think we have to get out of the mindset that regulation has to be a negative thing, that it has to be about prohibiting things that has to be about keeping something from happening. But think about regulation as an enabler, as providing parameters, providing confidence, providing a sense of public trust and global trust in how things are used.

Shayne MacLachlan [00:11:03] Just one last question. And to bring it back to the current pandemic we're all struggling through in so many respects. Spoken a lot about the role of AI and how we approach different technologies and so on. But what would you say are some of the limitations of using AI in the current pandemic and then beyond into the recovery?

Audrey Plonk [00:11:24] Well, certainly data. I mean, the limitations on AI, as you know, and both computing power, how much of it we have and what the systems look like and who has access to the computing power, you know, that's that's a fun without that you can't train algorithms and you can't feed data in time and so you don't have the outputs that you need. You really need the foundational, the infrastructure, the technology and then data. And and I think that's why you see us focussing so much on data both now and in the future at the OECD because it really is not only a factor of production, but it's a critical resource.

Robin Davis [00:12:03] As we heard from Audrey Plonk, and AI can help us in our COVID-19 recovery, but we must acknowledge the current limitations and need for rules to protect people and enable the technology and data and transparency are so important. Kathleen Walch is a principal analyst with Cognitive Etica, an organisation that monitors A.I development and industry. Clara Young spoke to her earlier this year and asked her about how people's own data is being used to train A.I. and how humans can stay in control of A.I.

Kathleen Walch [00:12:36] Data is at the heart of A.I., the more data you have in general, the better, especially for certain types of learning, their supervised learning, unsupervised learning and reinforcement learning and supervised learning. You need clean, well labelled data to teach the system what it is that you're learning. So as an example, that people always give us images of cats and you have clean wall labelled data of cats. And then you keep feeding it into the system in the system, then can give you with a certain degree of certainty, it's never 100 percent, but it'll give you with a certain degree of certainty that this image that it's never seen is a cat or is not a cat. With our personal data, it's been used for quite some time. So back in, you know, the early 2000s, people freely gave away their data for a variety of things, for email, for apps, for, you know, basically anything that you could use. Yeah, right. Facebook, you know, think about everything that you've signed up for. I'm a runner and I use a running app so that it can track my miles. And it uses GPS. It knows exactly where I am. I mean, it's like a GPS tracker, but I give up some of that privacy so that I can get the benefit of knowing my miles and my pace.

Clara Young [00:13:48] I have been hearing, though, that we may be reaching a point quite soon where humans will find it difficult to understand the decision making process that in a system went through, especially if it's a neural network or deep learning system. What do we do in that case?

Kathleen Walch [00:14:06] Yeah, so neural nets are considered black boxes because you can't go back and have traceability. You can't say, OK, I took this step, the misstep, the misstep, and I got to this decision because of this and trace back. So, these are issues that we're working through. We are trying to build and help pioneer a transparency score so that we can say, OK, well, you know, this algorithm and this model that you built is a three out of 10 in transparency. Well, what exactly does that mean? It's a multifactor transparency score. So it says, what's my source of data, do I know it? How often is my data, you know, retrained? Or how often do I get new data? And what algorithm did I use? Because some algorithms are more explainable than others decision trees, for example, they are more easily traceable. Neural nets, deep learning, that's a black box. It also comes down to. Is it OK to not be able to have 100 percent explainability and transparency? And if the answer is no, don't go with an A.I. If the answer is yes, say what degree is it OK? And maybe then you have a human go in and do a follow up behind it and say, well, if I was making this decision on my own, I would have done it this way. Maybe it'll agree. Maybe it won't.

Robin Davis [00:15:30] Hmm. Unknown black boxes. Maybe it will agree. Maybe it won't. Transparency and accountability are key for air to win people's trust and solve the problems people need solving and to help people do better at work. So what about policymakers? What are they doing and what should they not do? What kind of rules do we need? Jack Clark is the Head of Policy at Open AI. He also spoke with Clara Young.

Jack Clark [00:15:57] There are many more upsides than the downside, and what you probably need to do is align on who's accountable. So if I'm deploying an air system in a medical case, we do ultimately want a person or an entity to be accountable so that people have access to things like legal recourse if that makes a bad decision. I think a thing that lots of people can get confused about with regard to A.I. is because the technology is quite new. We sometimes think we need a ton of new regulatory interventions, but really it's we just need to fit this technology into a lot of our existing stuff because, you know, as you know, liability is sort of a well understood thing of a law that we've had millions of humans work on for, you know, millions of human years by now. So we don't need to change that off. We just need to find a way to get it to work for us here.

Clara Young [00:16:44] The European Commission just came out with a white paper, and they pointed out that the reality of A.I. is that there are certain situations that are not covered by existing legislation on consumer protection or privacy. So is it adaptable to all the situations that A.I. that can arise with A.I.?

Jack Clark [00:17:05] No decision making very cases where always going to be in places where we don't have sufficient regulations yet? What would this be? Well, I think this is actually a problem. I think it's hard for us to know what these areas are because governments don't have enough capacity to analyse and understand the technology and where it's turning up in society. So in my role on the AI Index of Steering Committee for that project, I try and work out where A.I. is being deployed, where A.I. is being used. Now, it might be surprising to you, but companies don't always be transparent about whether they're using A.I. at all. Guess my experience has been it's difficult to actually find out what information. And so if we want to have a regulatory regime which allows A.I. to be as beneficial as possible, we need governments to have a lot more awareness of where A.I. is being deployed in the economy. It's kind of a chicken and egg problem, but we do need to get that basic data.

Clara Young [00:17:59] And there's also the question of the expense of responsible A.I. because first, how would you define a trustworthy A.I. system? What are what are the characteristics?

Jack Clark [00:18:14] I think they're pretty similar to a trustworthy company or a trustworthy government. They have processes that are well documented and usually somewhat public, so that you can audit how they make decisions you may not know for particulars of. In the same way, you might not know the particulars of how a government has conversations about how to deal with a tense situation. You may not know exactly how an A.I. system reasons about how to deal with the situation, but you will know of a process which it uses to perform about reasoning, in the same way you know that if a government is faced of an issue as a process by which the government gathers information, consults people and makes a decision. So we need transparency into things like that. The additional thing is. We need a new set of incentives, I think, in society. So something implicit in your question and please push back if you think I I'm overselling your position is why aren't we having more good stuff happened with A.I.? You know what? You know, why are people like so nervous about this? And I I'd say to you that we need governments to actually work on creating better incentives for sort of beneficial A.I. systems to occur, because a lot of this comes down to things like commercial incentives, frankly. And we haven't made it attractive or incentivise these companies to do many more societally beneficial things. And that's why people have anxieties around the technology.

Clara Young [00:19:38] I've been hearing a lot about the problem with data that there's not enough of it or it's not good enough. Could you explain to us what's the difference between good data and bad data and what's representative and what's not representative? And what are the consequences of bad data?

Jack Clark [00:19:54] Something that we should think about, about the difference between good data and bad data? It's really representation. A lot of data seems good to me because I'm well represented in it because people usually have had an economic incentive to make it work well for people like me. But if I was someone from a different demographic or speaking of a radically different accent, A.I. systems wouldn't recognise me. They wouldn't understand me. They wouldn't be able to decode what I say. And that can give you an idea of how that would feel. Terribly unrepresentative to me in my experience of his

A.I. systems would be bad. So what we need to do to make sort of fairer datasets, is look at who the system is, if it is actually being deployed to benefit and then try and make sure they are represented in the datasets.

Robin Davis [00:20:37] So new rules, maybe not, but training AI not to repeat old biases, to make it neutral, trustworthy and to keep people in the driving seat so that we run a AI and not as a late Stephen Hawking feared have it superseding humans. The OECD AI Observatory is working to help make sure the AI does not evolve alone and keeps the human touch. To find out more, go to www.oecd.ai/en/

I'm Robin Davis. Thank you for listening. To listen to other OECD podcast, find us on iTunes, Spotify, Google Podcasts and www.SoundCloud.com/OECD