

Samantha: I don't know about you, but AI gives me the creeps.

Swathi: Interesting. What about AI? Like, what is creepy about it?

Samantha: I don't exactly know. I guess it's something you can't quite define by words, but it's slowly, well, it feels like it's slowly taking over our lives and stuff in ways that we recognise or we don't.

And I don't know how to feel about that.

Swathi: It's exciting, but at the same time, I'm a bit skeptical about the job opportunities that can come at a stake because of AI. And I also see how like every new product released has an AI technology. Actually, even my toothbrush. So, well, today's episode will either calm you down or make you more anxious.

Patricia: My name is Patricia Živković, and I'm originally from Croatia. I got to Aberdeen in 2019, where I started to work as a lecturer at the University of Aberdeen, School of Law.

Samantha: She's a senior lecturer. and teaches international dispute resolution and different courses on technology and law.

Swathi: Welcome to Beyond Boundaries from University of Aberdeen. We are both students at the University of Aberdeen and I'm Swathi.

Samantha: And I'm Samantha.

Swathi: This episode is all about law and AI.

Samantha: Okay, Swathi, so Patricia's first point might make you feel a little weird.

Patricia: We do live in a future at the moment, and I think often we don't even recognise how far we basically came in the past, let's say, decade. So what I like to tell my students, uh, is a story of me in 2014, suggesting to write an article on using AI in international commercial arbitration in a sense that AI or machine learning systems could actually substitute arbitrators, the decision makers who are human even now today, but machines can replicate certain cognitive functions. And that idea was, uh, basically ridiculed by my colleagues. I did write the article in the end, it did not get published because the publisher took so long that after a few years it was simply dated and I withdrew it. But now sitting

in 2024 when I am talking about the digitalization of dispute resolution. And when we are seriously considering to what extent we can use machine learning to substitute cognitive functions of human beings, it looks like a nice story to tell my students not to be discouraged by being, you know, creative and innovative and thinking ahead.

Samantha: Well, at first I, I feel kind of bad. It's kind of a shame that she wasn't heard to start with, to begin with, when she was essentially right. Just seeing this story pan out, it does almost emulate like one of those sci fi or slightly sci fi horror kind of films where, you know, things kind of creep up and then all of a sudden kind of take over in a way that you didn't expect.

So, it is a little bit disturbing in that sense. Um, what are you thinking, Swathi?

Swathi: I can understand the spooky bit you mentioned before, like, it sounds like we can be replaced. So the message I received from this is that like, if you're really passionate about something and you believe in it, just stick to it because Patricia was right.

Patricia: So what I do in my research is I try to actually focus on on, on the future. I try to think ahead. I try to predict potential social and ethical harms that can come with the technology that we are using and that is being developed. When it comes to the area of technology and law, the main problem lawyers have is that law is much slower discipline than technology that we are talking about. So the advancements that we have in technological development is not all, are not always predictable for us lawyers. So what I'm trying to do is basically merge sci fi and regulation. And the way to do that is to be constantly informed about different technological developments, about different products, and trying to think really beyond their benefits, what these products can bring new in terms of social harms, ethical challenges, and how can that be predicted in the legislation and properly addressed.

Swathi: And so if the law moves more slowly than technology, what are the lawyers doing differently in the future to keep up with the technology?

Patricia: The area I am in is definitely different. It requires a lot of interdisciplinary work. It requires a lot of discussions with many interesting people from computing science, from psychology, from anthropology, even medical school and so on.

All with this common goal that we try to understand what is it out there and how best to protect human society from possible downfalls. So the law adapts

slowly, or at least it did so far. The way that lawyers dealt with that is that we would go very broadly, very generally when it comes to the regulation of technology, because every, every year something new is in the market and it surprises lawyers and then suddenly we don't know what to do with it because when the regulation was made, that's not the technology that was on the table that we were thinking of. So it's definitely challenging.

Samantha: So what kind of person should take on this challenge? What skills do you need?

Patricia: I like to describe my area of research as the best choice for someone with growth mindset because learning is a, is a never ending activity. And I've learned throughout my career to actually get really excited when I don't know something. So talking to all these different disciplines excites me.

And then I think about it in the context of law and that's the value that I bring to the table. In my research, what I focus on is three main areas. One is emotion detection, which is very close to biometric data, neurotechnology or the regulation of neurotechnology and digital avatars. I'm a big fan of psychology.

I studied here at the University of Aberdeen as a professional development, basically counseling skills. So I got really interested in this other discipline. And this is what I'm saying when I say, we say that interdisciplinarity matters because understanding part of other, uh, discipline helped me understand that, you know, law might not be doing what, what we can at the moment when it comes to emotion detections.

So, emotion detection systems, the biggest revelation I had when I started researching them is that emotions are not biometrics, basically. That was my conclusion. And that is quite scary because I understood that every person that I've met would naturally expect that emotions that we express on our faces or through our bodily reactions are considered biometrics, but emotions are not biometrics.

They're basically inferences based on that biometric data that we can collect. And that makes it extremely dangerous. So when you go to a theme park and you participate in a certain testing group to see how a certain new ride is affecting people, does it bring joy, fear, adrenaline rush, and so on, you're basically giving away certain data that is being profiled through a system and categorised as a certain emotion.

And that's where the problem is because emotions are really complex. They are a product of verbal, nonverbal cues, bodily reactions, micro expressions, cultural influences, gender influences, and so on that at the end of the day, we don't have a coherent emotion theory. So many conclusions that can be reached can be wrong and decisions based on those can lead to certain social harms.

Swathi: I think it's really fascinating to think of emotion detection systems, but I've not heard of that before. Where would we find this technology? Like what kind of places?

Patricia: So one or two examples where emotion detection is already present, uh, is for example, in, uh, automotive industry, especially for, customisation purposes, so so the market, emotion detection can be really useful to customise services and products.

So if you're buying a car and you take it for a test drive, you could be basically analyzed through the system in the car to see what the reaction is to certain functions that the car has, especially new smart cars. Later on, once you're driving a smart car, the system can be used to discover your fatigue as a driver, because we know that we deal with the issue of people over relying on, on smart cars or as we call them autonomous vehicles.

Another example that I deal with, with my students is using it in educational settings. So, in some schools, it is possible to find emotion detection systems that are used to basically detect the attention of the pupils, uh, also to discover whether they're struggling with certain tasks, certain assignments, what is their reaction to feedback, and the same can be applied to teachers as well, which I always joke with my students. I ask them in the classroom, would you like me to know what you're feeling at any given moment of this class? And we all laugh together because we wouldn't. But the system is basically designed to help students in a learning environment to increase their performance success.

Swathi: I don't want to be constantly monitored. I think that is kind of scary for me thinking about it.

Samantha: I feel like if, if you knew that you were being monitored, you would start to consciously or not, like alter the way that you performed or acted in the classroom. So I don't know.

Swathi: Definitely. I think that would influence, isn't it?

I don't want to be constantly judged or monitored according to my emotions. And I sometimes want to keep it to myself. So it can be helpful, but I don't know. I think that. It's just figuring me out, like, it's just weird.

Samantha: Yeah, that's true. It would lose that sense of a community, I guess, that classrooms have. It would feel more like a stage or something. I don't know.

Swathi: More robotic, would you say that?

Samantha: I guess even, yeah.

Swathi: Yeah, I am skeptical. And like all advances in technology, Maybe technology itself isn't necessarily harmful or toxic, but how it's used.

Patricia: When it comes to harms, potential harms of this technology, uh, if we think about emotion detection, the first thing I'm very much concerned about is the fact that The theory of emotions is, is not a fixed theory.

So there are many of them. Uh, the wheel of emotion, if you just look at something like that, google it on the internet and you will see how many emotions are already identified, something that humans are struggling with to understand. And yet we are trying to teach the machine to understand our emotions or at least to recognise them.

So. I'm most afraid of inaccuracy in that system, but also what decisions are made on those inferences. If you're coming to work or you're coming to a school, or if you're simply walking on the street and being analyzed as to how you feel, what is that information? Why is that information necessary, and who is collecting it, and what decisions will be based on those inferences? When it comes to so called mental privacy or cognitive privacy, cognitive rights. I think we are just starting to open a Pandora box and hopefully at the end of the, we will find hope, but we are not quite understanding now. What is the scope of those rights? I think the role of a lawyer of the future is to be fearless and continue opening these new questions, new ethical and philosophical questions for such as cognitive liberty, integrity, right to privacy.

When we talk about our cognition and our emotions, right to self determination. Whether we can choose what we want to do with our brains or not, and to not to stop asking difficult questions, even when the society does not see the problem yet, because it's not right in front of them.

Swathi: I think I like the bit where she said, you know, humans don't understand emotions completely and we're trying to teach that to machines.

So isn't that funny to think about?

This is Beyond Boundaries, a podcast from the University of Aberdeen.

Samantha: We're still with Dr. Patricia Zilkovic from the School of Law.

Patricia: So when I talk about digital avatars and about digital versioning, I think about any technology that actually tries to transfer our data or use our data to create a certain version of that person in a digital form.

And it can be a really, you know, low key forms, such as death bots, which is now something that is highly disputable in ethical, philosophical, and legal communities.

Samantha: Hold on, death bots. What does that even mean?

Swathi: Well, it does sound creepy, doesn't it? Maybe it is.

Patricia: It's basically a chat bot that is trained on the data left over by a deceased person in order to help to deal with trauma of the person who was left behind.

So the system is trained on messages or voice messages or data that is input by the person that, um, had a loss and the chat bot is responding in the voice of the deceased person.

Samantha: I'm just wondering what the future consequences are for the mental health of that person who's interacting with a death bot.

Um, won't they become dependent on that as well? Is that not, I don't know.

Swathi: That sounds really interesting questions. I'm curious to know more about it.

Patricia: My main concern with that, that technology is already out, so these death bots that we call them are intended to be helpful by assisting the person that is left behind to deal with the grieving process, with the feeling of loss.

If we think about losing someone, it's not so unusual to think about us looking at their photographs or if we have voice messages, replaying them over and over again, grieving process is quite complex. It can become even more complex. But in this particular case, we are talking about creating an identity and that's where my main research is, because a lot is to be said about the people who are using these systems. But my main concern are the people who are no longer here. And to what extent have they consented to give their data to continue a certain presence in our world?

Swathi: Wow. So you have to think about the rights of the people using the technology, the deathbots. You also have to consider the rights of people who have died, but whose data is being used. That's, that's a lot actually to understand the possible consequences of these new technologies. It's really confusing and a lot to think about. Uh, yeah. And maybe that's why Patricia believes the next generation of lawyers need to be forward thinking and innovative.

Patricia: When it comes to this type of digital versioning that is used in death bots, I have to emphasize the importance of interdisciplinarity. So I'm, for example, in, uh, death studies. research group, which is a fantastic group that basically combines all the disciplines we have at the University of Aberdeen, where we are dealing with death from the perspectives of all these disciplines.

And it's incredible how easy one notion, That binds us all can actually create so many different projects. So from the legal point of view, the main issue that I'm encountering is the end of legal personality after we die. And my main question now in my research is whether that's the right way to go. So it opens all these interesting philosophical questions.

What is legal personality? It's nothing else but fiction because we agreed as the society who will have it should be extended to some extent or completely to actually our deceased. And then we will be able to protect their rights more effectively after they die. Because the way it is done now, all the data that remains after someone dies can unfortunately be used to create certain digital versions of them and can perpetuate this existence in the real world.

So for those who are thinking about entering the Law School, I have to say that exciting times are ahead of them. Um, even though what I'm talking about is research based, I also teach on it, but it's not part of the fundamental program. Technology will enter every part of law in due time. What I mean by that, even when you're going to study contract law in the future, technology is going to be, if not a product on the table, at least it might even become a stakeholder.

Yeah. When you're talking about medical law, again, technology will form a big part of it. Every bit of law that we are teaching right now will inevitably need to deal with certain technological aspects. So if you have any interest in this, I think it's the right time to to study Law because we will need the new generation of people who are used to this technological development and how fast it is and who will be able to think on their feet and make the right decisions in the future.

I think the main thing I get out of teaching and researching in this field is this rush of adrenaline when you're discovering something completely new and expanding the horizons in law. Because it gives you a lot of opportunities to do exactly that, to ask ridiculous questions that become very relevant in a year or two.

So working with my students, um, there is no better feeling than we are discussing legal, ethical, and social implications of technology in the class. And we are sort of discovering all of this together because that's what the field of law and technology is. It's an exploration.

Swathi: All right. How are you feeling now you've heard from Patricia? Calmer? More freaked out?

Samantha: I feel kind of neutral, I suppose. I like the fact that she said it's an exploration and there's still uncertainty with it, but we're kind of navigating that as we go. And yeah, I guess for people who are interested in everything that's a combination of law and technology, that's, yeah, there's lots of avenues.

And when it comes to that, um, me personally, I'm still a bit freaked out, but that's just me.

Swathi: I think it's really exciting to think about all the new opportunities that's in the ever changing field of law.

Samantha: Yeah. Okay. Well, thank you to Dr. Patricia Zilkovic for talking to us about her research, what studying law at the University of Aberdeen looks like.

Swathi: So if you want to join the Boundary Breakers, you can come to one of our open days and see our historic campus.

Samantha: And you can also download our digital prospectus at [www. avdn. ac. uk](http://www.avdn.ac.uk).

Swathi: And to hear more from us, check out the rest of the podcast. Each episode discusses the groundbreaking research from one of our Aberdeen's academics.