AI Ignition

Ignite your AI curiosity with Roz Picard

How can AI support wellbeing?

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

Beena Amaranth:

Hello, my name is Beena Amaranth, and I'm the executive director for Deloitte AI Institute. And today on AI ignition, we have Rosalind Picard, Roz, a professor, author, and inventor. Roz is the founder and director of the Affective Computing Research Group at the MIT Media Lab, as well as a co-founder of two companies: Affectiva Inc. and Empatica, Inc. Roz, welcome to the show. How have you been?

Rosalind Picard (Roz):

I'm doing well, Beena, thank you so much. How are you doing?

Beena:

I'm doing well, and I'm so glad I'm vaccinated, so I'm looking forward to getting out there and meeting people in real, so someday we might actually meet in person soon. I'm very excited about that. Roz, I really wanted to start our discussion with a field that you created—affective computing, the research group that you are the founder and director of, to advance human well-being via emotion AI. That's a fascinating area. Can you share a little bit more about what is emotion AI and why is it important and what does affective computing mean?

Roz Picard:

Yes, thanks. First, let me start with affective computing. When I framed the area of affective computing, I was referring to all computing that relates to, arises from, or deliberately influences human emotion.

And so that's a bit bigger than AI, but it has a huge intersection with AI. So, for example, affective computing also includes technology that might help better measure and communicate human emotion, whether or not it involves emotional intelligence or machine learning directly in the system. That said, a lot of affective computing does involve machine learning and what has come to be called AI these days.

So, if you look at the big circle of affective computing and the big circle of AI, there's a significant intersection, and that area has been named by my co-founder of Affectiva as emotion AI.

Now in that intersection between affective computing and AI is really the use of machine learning to help people better understand and communicate emotional information.

Beena:

Roz, that's fascinating. Can you share some real-world examples of emotion AI and affective computing?

Roz Picard:

Yes, one of the clearest ones for most people is to imagine a future social robot interacting with their customers, perhaps greeting them when they come into a public space. And a social robot is going to have cameras and when people interact with it, they're going to expect that that social robot will share their smile if they smile at it, or if they look like an angry customer, that that robot will stop smiling and look more muted and become very polite, possibly submissive. and offering of help to that customer. That ability to see the difference between a happy customer and an unhappy customer requires a lot of sophisticated machine learning and artificial intelligence. And when that artificial intelligence is used for the understanding and communication of emotion, that's an example of emotion AI.

Beena:

Yeah, and would you say emotion AI is primarily driven by facial recognition technology or do you use other markers to identify whether a customer is happy or getting angry? Can you go a little bit deeper into explaining how does that actually work?

Roz Picard:

It's important to not place too much emphasis on just one channel, where a channel is something like face or voice, because you get the most accurate reading of a situation when you combine multiple channels, when you look at the face, the voice, the posture, the gesture, the context. When you put all of that together, like, let's just say I told a joke, and then right after the joke, I see you crack a smile. Then probably I've amused you, unless maybe it's sort of a mean smile or a grimace, like a bad pun kind of a smile.

There are different kinds of smiles. There are different speeds of smiles. There are different contexts in which the same-looking smile can mean different things, so it's not as simple as just saying smiling means happy. In fact, 90% of people when they're frustrated, in studies we've done in office environments, 90% of the time they'll smile, even when they're frustrated. So you have to be much smarter than just looking for a simple facial expression.

Beena:

That's very interesting. And I love the way you explain it, how it's much more robust to look at all these different metrics. There is also an app that your team has released called The Guardian, and I actually downloaded it and I see how it's being used. You're using the power of gaming to reward and encourage healthy habit formation, right? How does that tie in with affective computing? And also what prompted you to create?

Roz Picard:

Yes, and again, affective computing involves more than the use of AI for emotion. The Guardians game is an example of a game developed in my group, mainly led by Craig Ferguson and Sarah Taylor, to make it fun to make behavioral changes that people need to make. We have been learning a lot about what promotes good mental health, and really in the sense that we wish the healthcare system was a true healthcare system, not a sick care system. If we had a real healthcare system, it would help keep people healthy.

So, we've been studying the science of what keeps people healthy, especially when they're subjected to intense pressures, tough work environments, major stressors, unusual shifts in schedules and sleep. All of those factors can take a big toll on mental health, and we're looking at what are the factors that lead people to bounce back versus what are the factors that make people very fragile and likely to decline into bad mental health when they're put in these tough environments? So, we want to figure out how to help people be on the path that bounces back. And to do that, we've been learning a whole lot of behaviors that if you put them in place, we think they foster greater resilience, they build you into like a strong oak tree, able to handle the storms versus one of these little weed trees that go snap when the bad weather comes. So, to do that we then have to get you to do these behaviors. It's one thing in theory to know what they are, but everybody who's successfully fallen off their diet, unsuccessfully dieted, everybody knows how hard it is to actually do what you're supposed to do. So this game helps make it fun to do what you choose to do that hopefully is going to help you be more resilient.

Beena:

Yes, and I think this is so relevant in the times that we're living in today. At Deloitte, well-being is a big part of how we work within Deloitte. And I've also seen it across different companies, mental health, well-being are huge topics. Is this game available to everybody or is it more still in the beta mode?

Roz Picard:

It is. We have put it on the web for free for everybody. It is not collecting your personal data. It is not trying to sell you ads, it is our free gift to the world during this pandemic to just say, "Hey, we know it's a hard time out there. We just want to give something to help people out."

Beena:

How do you think, beyond this, what are your thoughts on how AI and technology can help with employee well-being and mental health?

Roz Picard:

This is such a great question to hear and one of the things I love about it is it's focused on how to keep people well. Imagine if instead of 20 to 50% of your employees having to deal with depression or anxiety

or really bad problems that make their lives miserable, make their families miserable, and hurt productivity, imagine if you could prevent 80 to 90% of that. And while we can't prevent all mental health problems, I think the number one mental health problem of anxiety disorders and the number two mental health problem, and these are global, of depression. I think at least half of those cases and maybe up to 80% of them might be completely preventable, or at least significantly mitigated to where it's just the occasional day or two of feeling blah or stressed.

So how do you do that? Well, there's actually a lot of great science on how to both prevent a lot of these challenges and fix them when they're little bitty problems before they become huge problems. So the science I think is there, but the behavior, the support for the behavior, the awareness that this is real, that it really matters and it's not just like what your grandma told you to do, which is really wise, by the way, that there's no science showing these things. The ability to take these things seriously, I don't see that as prevalent in corporate America yet as it will be. I predict it's going to become highly prevalent and just like people don't smoke in boardrooms anymore, we're going to start taking better care of our employees' sleep and schedules and helping them learn how to build smart relationships, which, by the way, not only makes them much better managers and think of all the time you would save if you didn't have to deal with people problems. I mean, how stressful and time-consuming those things are. If you could improve people's ability to make relationships and deal with bad emotional stressors, then companies could be a lot more productive, and people could go home a lot happier, their spouses, significant others would be much happier, their children would be happier, and then they're able to be more productive and creative and just a lot more effective.

Beena:

So true. I am—I would say I'm relatively new to Deloitte. I've been here for almost two years now, and I was pleasantly surprised when I joined that Deloitte actually has a C-suite executive focused on well-being, the chief well-being officer, and her role is to think about employee well-being, mental health, and there are games and there are surveys to just constantly make sure that employees are thinking about their own wellness and the company is engaged with them. And then when the pandemic hit, it actually took it to a whole new level. And you're right, we are seeing more and more companies doing this. We're also seeing the broader need around purpose. And whether it is setting up a purpose office like we have here, but bringing in all those impacts of technology beyond value creation, the negative impacts that could be happening, whether it is about mental health or about climate change and sustainability, how is technology driving that in a bad way. Thinking about all these different aspects and putting more thought into it. I completely agree with your prediction that we're going to see more and more of these C-suite roles evolving and more focus being put into the area around employee well-being. I think we definitely see that being accelerated in the past year or so.

Now changing gears a little bit, I know you're very passionate about wearable technology and how to leverage that as well. And with your new company Empatica, you've created the first AI-based smartwatch cleared by the FDA to monitor seizures. Can you share a little bit about the work you're doing there and how that is actually moving the whole wearable industry forward?

Roz Picard:

Yes, and I'm also excited to say we recently created also the first smartwatch cleared in the European Union—we're still working on data for FDA—that is able to use AI to forecast if that feeling you have

tonight—I don't know if you've ever experienced this, but sometimes when you've been pushing really hard, at night you're just exhausted and you don't know, am I just tired because I'm pushing hard or am I tired because I'm getting sick? And that difference might cause you to go to bed early if you're getting sick or just stay up and push a little bit more if you've got a deadline tomorrow. And I've always wondered, like could I tell?

Well, it turns out our wearable data we've been collecting that I've been staring at and I thought I saw something in there that might tell the difference. After much more careful studies, years of careful studies with Duke, Stanford, Columbia, a whole bunch of partners building on work we started at MIT, well, Empatica has just filed in the European Union for medical clearance to market the AI that can forecast if tomorrow you're going to have a positive viral infection test or a negative test. And it's sensitive and specific enough that it has just been cleared for medical marketing in the European Union. So very exciting.

In addition to Empatica having an FDA-cleared seizure biomarker, Empatica now has a European Union–cleared marker that says, "Yes, we think you're infected with a viral respiratory infection," or "No, you look like you're clear." And it is now validated with a nasal swab gold standard test that shows if you're positive for H1N1, rhinovirus, two kinds of influenza, or COVID-19. Now it doesn't say which one of those you have or that you definitely have influenza or SARS-CoV-2. However, it says that your body is changing physiologically in a pattern that is highly consistent with having that positive PCR test tomorrow or having a negative PCR test tomorrow. So it helps you discriminate normal fatigue and stress from that heightened immune response that makes you tired and stressed but means you really better get to bed and actually schedule a PCR tomorrow, stay away from people at risk, maybe schedule to see your doctor, get a real swab, and find out. If it's one of the flus, you could take something like Tamiflu. Maybe in the future we'll have other early interventions for SARS-CoV-2 or other things that cause this immune system response. So I see it as on the front of medicine that is more preventative. In this case, it's not preventing you from getting sick, but it is hopefully preventing you from having significant duration of illness and preventing you from giving it to somebody else when you may be completely asymptomatic, other than the stress and fatigue, which for a lot of Deloitte and other hard-pushing workers, stress and fatigue feels like a normal part of existence. You just learn to kind of ignore it. But if it's actually a sign of your body's immune system fighting something, you don't want to ignore it. You want to protect those around you and get well fast.

Beena:

So, Roz, changing gears a little bit, moving beyond healthcare, how do you see the work that you're doing relevant in different industries? I know you are a thought leader and I want to also hear how is AI in general impacting different industries from your perspective. But maybe let's start with how is affective computing impacting different industries or is it primarily from a custom success area?

Roz Picard:

Yeah, affective computing is impacting pretty much every industry that involves people. For example, there is a huge impact right now in automotive, in looking at the state of the operator of the truck or the car. Is that person stressed, angry, distracted, tired? All of these affective state variables show in more than your face. In fact, sometimes your face can be blank, and it will show in other things we can measure from you.

And again, in affective computing, traditionally we go into an environment, and we look at all the things that might be changing with your affective state. It could be affecting how hard you're squeezing something, the jerkiness of your movement, the way that you're shifting in a chair. The face is just one of many things. We always measure with fully informed consent, talking to people about opting in, knowing what information you're sharing, and making sure that there's a benefit for them. Why should they share this information if they don't benefit from it, right? So, it's a complex equation we work on and then when all the variables are okay and there's outside external ethics review approval of it before we start a study, then we begin to do measurements. And those measurements have shown huge advantages to supporting drivers in being safer and also even understanding sometimes the state of passengers to improve their experience. Because a lot of people are predicting that we might have driverless cars in the future and I'm maybe a little more conservative on that, noticing that, by the way, automatic pilots have been helping fly planes for, guess what, more than 100 years, but we still have human pilots there. And I think there are other reasons why automobiles have a much more complex environment to deal with than airplanes.

Nonetheless, whether it's driven by a human or a human is just a passenger, we all know that there's a lot of stress in vehicles, even in driverless cars. We've measured the stress in some of the very first driverless cars. There's a lot of stress. So we can do things to help people. And at the media lab, we've been building other technology that goes in the seatbelt or in the ambient modulation of the sound and other aspects of the environment that can help you change your breathing rate and have a much more focused and calm experience, to the point where we actually have to be careful of the other side, which is we don't want to put you to sleep, right? So, there's always a sweet spot here. I adjust it. I use our technology myself when I'm doing work on—it used to be a lot on airplanes and now even at home. And I dial it a certain way to pep me up and another way to calm me down and focus me. And it's really cool how these technologies, even without using AI, just taking what we've learned from the AI can help improve your experience and your productivity.

Beena:

This is a great example. I wouldn't even have thought of how it might be relevant for driverless cars, that is so relevant. I think we've all latched onto this notion of AI, and there's so much hype around it and there is, even with just advanced statistics or machine learning, there is already so much impact happening and value being created in industries and companies across the world, that you are seeing significant changes in the workforce, for example, or in talent. Even with this compared to 10 years ago, you're seeing new roles that have come up, which didn't exist 10 years ago. So what are your thoughts about some of the jobs that have been created and some of the jobs that will continue to get created?

Roz Picard:

I think when it comes to jobs where the success depends a lot upon human connection, we're going to see humans continue to be in those roles, perhaps augmented by AI, but not replaced by AI. Let me give an example in healthcare. I think the patient-nurse interaction is a very special one, and I'll say nurse in a general sense. There are a lot of healthcare professionals that you can encounter besides nurses who can connect with you in a way that could be super important for calming, for reassuring, for giving you a sense of presence that is not replaced by a machine. Now let me back up because a moment ago I was saying, hey, I'm building these AIs that can be very calming, these technologies that help with respiration. And we do have those, and they are useful. And it might be that a nurse or a person talks to

you a little bit and then says, "Hey, is it okay with you if I leave this on? Maybe this helps calm and reassure you."

I think the technology used with a person is much more valuable than the technology used alone. We have seen this, for example, when the AI presents an empathetic statement to a user in a controlled study where we randomize the information the user is given. The user is told, "This is coming from a human," or "This is coming from a chatbot." And even when it's identical comment, rated as really high-quality content, when it comes from the chatbot, humans don't think it's as valuable. They don't think it's as effective. And all we've changed is the source.

Just the knowledge that another human is playing chess with you or another human is there with you, it makes a difference. And while we might exactly reproduce what is said or the appearance or some other information content of that interaction, we cannot replace people with AI.

Beena:

So true. The work we do, our fundamental belief is it's about augmented intelligence and humans with machines and making things better. I love the way you articulated it. Do you see any new kinds of roles or skillsets that are needed to succeed in the new era that's coming at us as the machines get smarter, or as our software technologies become smarter and can help augment us better. What are the new skillsets in your view that our talent pools should be thinking about?

Roz Picard:

I think that more than ever it's important for people to have some basic fluency about what AI can do and also what it hasn't been shown to do. I also think it would be great to have fluency about the kinds of performance measures that AI is measured against. When an AI researcher like me says that something is achieving 98% accuracy, this term *accuracy*, there needs to be some questions given back. Okay, so you're 99% accurate at detecting if a seizure is there, but what is the false alarm rate? How often does it detect something that it says is a seizure, but it's not? Well, we have that rate down very low now. The false alarm rate when submitted to FDA was less than one every five days. Now it's gone even lower. But that's an important question to ask. Not just the accuracy, but okay, that car was shown to be accurate in this environment under this weather up to 98%. But you multiply that by a billion drives, how many accidents is that? What is the rate when it's in environments that it hasn't been tested in? What is the rate when it's under road conditions that are outside the parameters studied?

I think that everybody should feel comfortable asking those kinds of tough questions of the AI researchers, because the limits in the data set imply unknowns about the performance in the real world, and everybody should have that kind of critical thinking about AI.

There's another set of skills that I think everybody is going to need increasingly in the workforce. It's funny because some people will sound dismissive of this because they'll say, oh, those are soft skills, but I'd say if you measure the effect of these soft skills on productivity and people's ability to make those around them successful, you will find that these are super important. And if you look at how hard they are to do, you'll change them from being called soft skills to extremely hard skills. These are hard skills.

And these hard skills are the skills of showing empathy, and I don't mean just like feeling sad when somebody else is sad, I mean, making them feel that you understand them, and this is not the same as

saying, "Oh, I understand you're having trouble." This is different from that. This is really reflecting back to them and understanding of what they're going through in a way that helps them feel understood and get to the next step, which is the ability to solve their problems and move past it. That skill is extremely important. I've seen that skill have lawsuits called off. I have seen that skill make a huge, huge difference in how a project succeeds or fails. It's an incredibly important skill, and a lot of people kind of think they can do it, but they can't. They're not very good at it. It's like me hitting a goofball. I'm not very good at it. I'm not going to go up against the pros. This is a skill that if you get to be as good as the pros, it will make a difference, not just in your game, but in your workplace.

Beena:

Love it. You've touched on it briefly throughout this conversation around thinking about ethics and bias. In your viewpoint, where are we about thinking on ethics? There's obviously a lot of talk on it, but how close are we to solving some of those complex icky challenges around fairness, bias, transparency? These are all headline-catching topics, but how close are we to solving some of it? And how are you addressing it in the companies that you founded?

Roz Picard:

It's very exciting to see how the AI Community has jumped on the bandwagon of promoting transparency, interpretability, fairness, debiasing data. It has been a very fast response to the red flags that were presented early on. For example, by Joy Buoylamwini at the Media Lab showing that some of the face recognition systems were biased toward white males. They were better performing at them than they were at women and people of darker skin types.

So that kind of bias is there in datasets. And one thing really exciting about the potential to solve it is it's very solvable. By getting more representative datasets, you could solve that bias. The machine learning, most of the systems can fix it. There're occasional cases where we've looked at things like a sensor might work differently in terms of the light received against dark skin versus light, but those things now also are being adjusted and tuned in wearables and other systems. So I'm very optimistic that those kinds of biases can be removed. In fact, I'm more optimistic that AI will be unbiased before people will be unbiased, because with people you can hide it, you can't measure it. It's harder to manage. With AI, it's measurable, it's manageable. I think it's soon going to be solved in AI, the bias is.

Now that said, when it comes to transparency and interpretability, people are still way ahead of AI. It's very hard to do really interpretable AI. There's been some super nice progress made with it recently. The work of Asma Ghandeharioun at the MIT Media Lab, I think really moves things forward significantly. She has shown a new automated way for the algorithms to go in and discover different pathways to the key classification decisions that an AI is making. And the algorithm also synthesizes examples along that pathway. So not only is the algorithm finding these different interpretations, but it's presenting them to people in a way that are interpretable by people, and I think that's a big leap forward in interpretability.

Now it is limited to certain kinds of AIs right now. We need to see if it's going to work for other kinds, and I'm optimistic that it will lead to more work there. Can we prove that it has interpreted all the things that might do wrong? Unfortunately, we still can't prove that. That is still a Holy Grail.

Beena:

So true. There are also nuances around ethics that we see across different industries. I think there's a lot of focus put on bias, fairness, and transparency, but there are things like the safety and security or reliability of an algorithm once it's in production. Because the reality is that depending on which industry or even within the industry, which use case you're working on, the ethical implications might be different. And I give this example of when you're trying to predict failure of a machine on a factory floor and you're using just the machine sensor data. Fairness and bias just doesn't apply from an ethical part. What applies more is the robustness or the reliability of the model that's being used. And then the bigger challenge around how do you drive the cultural change needed to adopt AI. So, the nuances of AI in the real world expand a little bit more than fairness, bias, transparency. But we also see more appetite for driving that change, for thinking about ethics early on and saying, how do we actually put the guardrails in place early on? And I'm so glad the work that you shared. I'm very familiar with the work Joy has done and would love to learn more about the work that Asma is doing. Do you see, especially when you spoke about data representation, where a lot of data that we use historically, it tends to come biased because humans are biased and our historical data is biased. Do you see a lot of progress happening in terms of using synthetic data to address some of these challenges? There are so many things that you bring up that we could go deep into. A question that I have just broadly is the technologies that we are using in the real world are still developing, in research groups, in academia. There's a lot of development still happening while it's beginning to be used in the real world in industries. In your opinion, what has worked to drive that innovation or partnership closer between academia and industry so that we can tap into research sooner rather than later? How has it worked for you?

Roz Picard:

Well, I'm very blessed to be at the MIT Media Lab, where I think we have one of the most enlightened models of how to work with industry. MIT for its whole lifetime has been one of the most heavily engaged with industry of all research universities, and the Media Lab as a part of MIT is even the heaviest engaged part. We interact regularly with industry. We share our ideas openly. We invite them in physically, when there's no pandemic, virtually, right now, to show what we're creating to get their input, and what tends to happen is a researcher will have, like, "Oh, I've got like 15 to 20 ideas of how this could be used." And then industry comes in and says, "Well, what about this? Well, could it be used for this? Well, explain this a little bit more. I don't understand this." And that process leads us to refine our focus on the research on things that can improve the world better that industry really cares about. Industry tends to understand the real problems a lot better than researchers. We tend to be sometimes a little naive about what the world really cares about and a little bit more obsessed with some cool new math or technology that we just invented last week. And oh my gosh, look, it works, like wow, now we gotta find a use for this.

And so, by interacting and by really having a comfortable, creative environment where people can ask any questions, there's no stupid questions, we can share ideas, get kind of on the same page, that leads to amazing innovation. I have seen so many things where we were thinking they should go this way, industry shows us there's a much better value proposition over here. And so that really early engagement is, I think, really magic for getting technology that is both better for the world and more quickly adopted in the world.

Beena:

Yeah, and maybe that goes the next question. Companies are in different stages of their AI journey, some are still early on, have done a few POCs, have a couple of AI solutions in production. Some are well advanced in using AI in every aspect of their business. And then there's the companies that are in the middle. What's your advice to CEOs and board members of companies that are just in the initial phases of their AI journey?

Roz Picard:

If you're just in the beginning of your AI journey, first of all, congratulations for even beginning it, because it's a steep learning curve at the beginning. I would encourage you to not be shy about asking questions and testing your understanding and don't just take some brainy answer of "oh, it's 99% accurate" as meaning that it's going to work in your space. You can hire a machine learning student from a local university to come in and ask some tough questions about it. You can learn how to ask tough questions. Get somebody on your team who really takes time to learn the latest stuff and isn't intimidated by the math. Get somebody who understands failure and can communicate that and can have the group touting the great new method. Get the kind of data that you actually want to apply the AI to and really test it in that environment. And nothing beats testing the AI on your data in your real use case.

Ultimately, what's learned in one space may not generalize to your space. A completely different method may be optimal on your data. In fact, there is theory—pay attention, a little quick nugget here—you'll impress your machine learning people if you've heard of the no free lunch theorem in machine learning, which is essentially—the super simplified version of it is that no one method is going to be best for all problems. Just because they've shown this method is better than all these other over there, it may actually be the worst method for your problem. So, ultimately, the best method for your problem is the one that works on your data. And I mean not just on one data set, but when it's trained on one data set and tested on one that it hasn't seen yet, it still does really well on that unseen data.

Beena:

What about the companies that are well advanced in their AI? What should they be thinking about next?

Roz Picard:

If you're advanced in your AI journey, I would hope that you have not lost sight of how important people are. And you may be enamored with some amazing success your AI is making, and that's great. I would ask you to ask the next level, which is if we value the people more than the AI and put these together, can we do something even greater than the AI is doing? Sometimes it's easy to get sucked into the measurable stuff and get all excited about this system works much better than that one. But then when you take that system and you put it in with a group of people and the people use it, what if their decision-making gets worse?

We have actually seen in some studies that the optimized AI plus the human expert, including a medical expert, can actually make a worse decision than either makes alone. We don't want that. We want the AI plus human or the final deployed system to do better, and we want to make sure that we've taken care of preventing any catastrophes, and we want to make sure that that rare but horrible thing that might happen doesn't happen.

So, you've got to look at these AI systems, not just in a spreadsheet and how accurate they're doing on test data, but in the context with the employees or the people who are using them. And look at how accurate the end deployed solution is. Don't stop testing with just the AI. Look at the deployed environment.

Beena:

So true. We are also seeing that big need around ML Ops or the whole once it's in production, how do you keep it continuously reliable and no new challenges are creeping in. Roz, this has been such a great discussion. I've certainly learned a lot. How can people stay in touch with you, follow you with all the amazing work that you're doing? Can you share?

Roz Picard:

Yes, I can be reached at Picard@media.mit.edu. Online on social media, I'm Rosalind Picard, smash the two names together on Twitter. I also have a very fledgling Instagram account. I've heard from the students that Instagram is the most stressful social media. I'm a little late to it. I'm RW Picard on Instagram.

And I encourage you to follow the amazing work going on at Empatica. That's the Italian word for empathy. E-M-P-A-T-I-C-A. Empatic.com and their blog, as well, where I sometimes guest write.

Beena:

Roz, thank you so much for being on the show today. I really enjoyed our discussion, and I actually look forward to staying connected.

Roz Picard:

Thank you, Beena, I look forward to staying in touch with you too, and your Deloitte extended family should know we are so grateful to have Deloitte as members of the MIT Media Lab, and I hope that all Deloitte employees will come and visit the MIT Media Lab, engage with us, ask us questions, and let's work together to build that better future that we think we can all build with AI and people—AI plus people, together.

Thanks for tuning in to another episode. Check out our AI Ignition page on the Deloitte AI Institute website for full video and podcast episodes, and tune in next time for more thought-provoking conversations with AI leaders around the world.