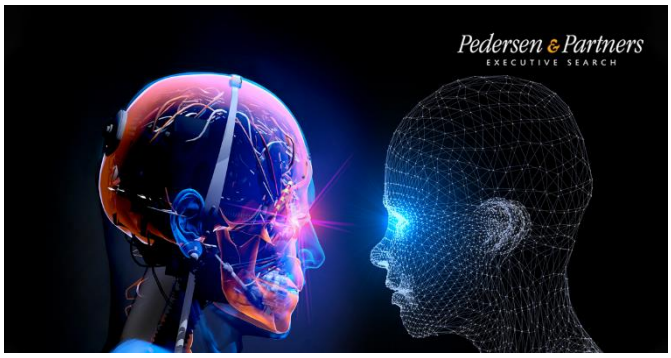
I build technology to enable better human interaction

Riga, Latvia – Māra Pudāne interviewed for Riga Tech Girls by Evita Lune, Partner at Pedersen & Partners.

Māra Pudāne *is a Scientific Researcher at Department of Artificial Intelligence and Systems Engineering, part of the Riga Technical University (RTU). Māra has a BA and Masters degrees of Engineering Sciences in Computer Systems from RTU and a wealth of publications and research in Artificial Intelligence. Her current focus is on developing affective computing systems to simulate human group behavior which would eventually be used to assist people with emotional challenges.*



Evita: Can you tell us about the Riga Technical University and what is your role there?

Māra: RTU is the largest engineering university in Latvia. I am working in the Department of Artificial Intelligence and Systems Engineering. We are doing Artificial Intelligence (AI) research in our department focusing on different applications, such as robotics and intelligent tutoring systems. My main area of research is using AI in the simulation of processes in which intelligent beings are involved. More specifically, I'm considering the role of emotions in these processes, which is a relatively new direction of AI; to my knowledge, we are the first ones in Latvia who started researching and working on this.

Evita: What is your ambition and what is the international focus of your work from the scientific perspective?

Māra: My inspiration for this topic came from the fact that people use a lot of electronics nowadays and thus loose social contact. People who choose to interact with their phones instead of peers lose in the long term, because for example in the job market those who have stronger ability to socialize tend to do better. This means that people need to acquire social skills, for example, how to behave with others appropriately. This, in turn, is closely related to emotional skills, which also called Emotional Intelligence—how well we are able to understand and regulate our own emotions and the emotions of others.

"Currently, our academic systems are focused on developing IQ, but there is very little emphasis on EQ. The acquiring of EQ skills occurs naturally in the classroom while people interact with each other. However, if people don't interact anymore, there is a problem."

My initial idea was to create an artificial playground for kids where they would be able to develop social and emotional skills by interacting with a group of artificial peers, play various scenarios, but would not hurt actual people. Once I started researching, I realized that on the one hand there has been quite a lot done in this area, but on the other hand, not nearly enough. I have currently put aside developing something like this for children since it involves many more challenges, as children require very specific strategies and tactics; additionally, there is an entirely different layer of ethical perspective when it comes to children.

At the same time, to develop something like this for adults, I still need to have a believable enough group of artificial peers; I mean, you don't want a bunch of robots to socialize with. For communication to make sense, a person using this simulation should believe that s/he is talking to actual humans. Currently, I'm working on simulating a group of artificial humans who interact with each other and make it as close as possible to human communication.

Evita: Your research also looks closely into crowds and predicting their behavior, is it just one part of your work or your main focus?

Māra: It's not my main focus but it is a part of my research. A crowd as a structure is a bit simpler than a group of people who know each other, let's say, co-workers. A crowd has a basic structure and it's easier to predict its behavior.

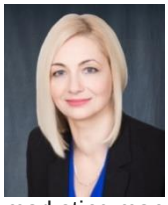
When people pass emotions from one to the other, there are several ways for this to happen, which I call mechanisms. When it comes to the crowd, there are just one or two mechanisms involved in passing emotions, while in the work groups there are five mechanisms.

For example, a simple, yet effective mechanism to pass an emotion is to express it verbally; this is a direct manifestation of how you are feeling at this moment—we often use it with people we know.

In a crowd, direct emotion expression does not work. Instead, we use a mechanism based on mimicry. People tend to mimic the emotions of others: if someone smiles, we tend to smile; such behavior is coded in our low-level social behavior models. This mechanism is called emotion contagion because it occurs exactly like a virus.

It's much harder to predict the behavior of the coworkers because coworkers have relationships, i.e., a social structure, and have common things that they need to accomplish. More importantly, they have the ability to communicate if they like or dislike the behavior of another person. Therefore, predicting their behavior is so much more difficult. This is why current models that I have were first applied to crowds. Nevertheless, we are also working on scientific research and publications that cover other types of groups.

Read the whole interview here.



Evita Lune is a Partner who drives the firm's Global Digital Economy. She has completed over 50 senior level assignments in 29 countries within this practice, out of her total portfolio of over 600 assignments. Ms. Lune works extensively with FinTech clients from the Baltic sea region (Scandinavia, Baltics, Poland) and supports their global expansion plans in all continents by providing effective executive search solutions. As a team leader and regional director, she manages Pedersen & Partners teams in Poland, Baltics and Belarus. Her previous experience includes three years with the Stockholm School of Economics in Riga as the Executive MBA Program Director and six years with Shell in international and regional marketing management functions in Riga, Budapest, and Brussels.
Ms. Lune was a speaker at the CEE FutureTech congress in Warsaw - one of the most important business summits in Central and Eastern Europe and participated in Blockchain Pre-Accelerator Program at University of Latvia. She is also a blogger for RigaTechGirls and a Jury Member of CEE Capital Markets and FinTech Awards. Ms. Lune was recognized by Forbes as one of the top 25 most influential women in Latvia for two years in a row.

If you would like to conduct an interview with a representative of Pedersen & Partners, or have other media-related requests, please contact:
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