Thomas Bredillet, Facebook's Machine Learning Lead, sat down with Frank Casale, IRPA AI Founder, to take a deep dive into Thomas's role at Facebook, how the work he does directly impacts the user experience, what he will discuss at next week's Automation Innovation Conference, how Facebook's AI journey varies from traditional global 2000 organizations and more in this exclusive interview.

Frank: What is your role at Facebook?

Thomas: I'm a tech lead at Facebook, specifically Instagram. I've been there for a couple years now, and I journeyed from Google before that.

I'm basically in charge of the AI and machine learning that happens behind the scenes when you open Instagram. So, when you open Instagram, you reach your homepage and there's quite a bunch of AI systems behind it that try to enhance your user experience.

This is basically my team, so specifically, what I do is on the technical level. I build some statistical models to try to understand what can improve the user experience.

I also come up with road maps around what could be impactful, where we should invest our time, looking for new techniques, where we should be more sophisticated, and where simple heuristics can be enough.

Basically, the entire goal of the team is to enhance your experience, make you more engaged on Instagram, and just make an overall better app and something more customized for users.

Frank: Okay, great. You're right at the forefront of this. Can tell us a little bit about what you plan on talking about at during your keynote presentation at IRPA AI's Automation Innovation Conference, this Thursday, November 29th at the Convene in NYC?

Thomas: I think, initially, I'm going to explain specifically the kind of problem we're trying to solve. There are many different issues that you may not really think about, but they're not exactly obvious.

I want to detail the kinds of things we're thinking about and where AI and machine learning can really come and shine to solve those problems much better than what can a human being do, actually. So, I want to really emphasize the description of what we're trying to do here and the problems we're facing.

Then, I'll probably go over some quick results to give people incentives to pay attention to what I'm going to say. I'm going to go over what has worked and how well it has worked. I'll talk about how we are one of the most impactful teams at Instagram, and how AI became one of the centerpieces of what we're doing here at Instagram.

No matter what the type of product you're working on, you probably always have a machine learning team supporting you. Once I've described all of these things, I'm going to go over some light technical slides where I'm going to try to explain the essence of what we're doing.

This will both start an organizational management type of matter, like how do you scale a team of engineers and mathematicians, the kinds of challenges we're facing, and also briefly the overall explanation in layman's terms of the techniques we're using.

So, we use the terms "AI" and "machine learning" a lot, but what actually happens behind the scenes -- this won't be too technical, but it's really to give an intuition of why it works and then how it makes the experience better.

Frank: That sounds great. We work with many global 2000 organizations who believe that AI is likely easier for Facebook because this is in your DNA, since you've been doing it from the beginning.

There are hundred-year-old banks or insurance companies that have a significant amount of traditional labor, traditional processes, and are just doing things the old-fashioned way. The majority of them are taking their first baby steps with robotic process automation.

In your opinion, are these global 2000 organizations correct? If so, what is your recommended path for them, knowing that they cannot start with AI and it's a bit too big and complex for them?

Thomas: That's a very good point. I am a fan of where this idea comes from, but I would argue it's actually opposite.

Facebook is new, and we've been very technology-driven from the beginning, but you can imagine that you have amazing returns when you start with amazing things. I would argue that a company that is more traditional has actually way more headroom to have a lot of impact by starting to automate some things.

When I say "automate" here, I'm being careful with the choice of my words. It doesn't have to be something extremely sophisticated, or you don't necessarily need a bigger team of mathematicians to come up with this.

I think starting to think about heuristics that could help you, or maybe even thinking of an existing service that has been around for a long time, and then questioning hypotheses.

For example, when you follow people on Instagram, you have things in a specific, chronological order. At some point, a couple years ago, we decided to rethink this. This was one of the core hypotheses that we made when we did it with the product, and we started questioning this.

I think a lot of these more traditional industries can start thinking, "You know, we've made this hypothesis for a long time, but do we really have to do that?" Once you start questioning those fundamental hypotheses, you can start thinking about potential heuristics like: "Does it really make sense? What could be better than just the simple hypotheses we've been making for so long?"

Again, I think that those companies are prime targets for automation because having never done so before, the first jump is by far the most impactful one. So, I think that it's absolutely fair to say that these types of companies are actually even better targets than the newer ones like Facebook.

Frank: So, you're saying it's the opposite of what many people think? That'll be a very compelling thought for many of our members.

Most global 2000 midmarket organizations are taking baby steps. The most common path that I'm seeing companies embark on is basic textbook RPA. After they gain some experience there, they expand to intelligent automation then move toward some sort of a broader AI solution.

The majority of the business and technology executives feel that that's the wise and prudent way to go. There's a smaller group out there who believe that path will take you five or six years and be insanity. And, the market share that you will give up that you'd need to basically flip a switch, make a commitment, and move toward AI. How do you weigh in on that?

Thomas: On some level, basically, it's a trust relationship, right? You're giving a process that's somewhat automated some sort of a decision-making power here. That can be scary.

But I think that first of all, there should not be RPA for the sake of RPA. You always should find specific processes of products that you think are currently inefficient, and you should ask yourself the question, "Can that be improved upon?"

Once you think about it this way, it's actually fairly easy to start slow and progressively have the trust heuristic kicking in, so you give some sort of

responsibility. You automate the small part of the system and you say, "All right, this is going clearly much better than before."

Gradually, you increase the responsibilities and the amount of functionalities that are automated. So frankly, you don't have to make a big jump right off the bat. You can find a smaller part of the system - you can break down processes into smaller components and try to automate those first.

As you gain trust, as you gain more understanding of how these things work and what works and what doesn't, you gradually become more comfortable. That's how you fully automate your systems - eventually, of course.

So really, I think it's important to understand also that the state from non-automated to somewhat automated is not truly that big or complex. Many different skills and people with many different skill sets, can successfully do that. I think this is how you build trust.

Thomas Bredillet will deliver the keynote presentation about the AI enabled enterprise at IRPA AI's Automation Innovation NY Conference, this Thursday, November 29th at the Convene in NYC.

Those who are laying a foundation today for an AI enabled enterprisetomorrow are going to be the ones to re-shape their respective industries in major ways. Join this session to gain vision on the coming AI enabled enterprise. To learn more about this session, check out the agenda.

About Automation Innovation NY Conference:

This year, companies like Google, Facebook, Fannie Mae, PwC, EY and many more who will focus on the AI enabled enterprise, as well as harmonizing RPA, intelligent automation and cognitive.

Join us to get valuable content from leading experts, form new relationships, learn about industry successes and failures, network with 300+ attendees and have some fun. This is the industry's first and longest running conference exclusively about automation, AI, cognitive and RPA, held by the first and only association focused on automation & AI. To learn more, visit www.irpaai.com/automationinnovation.