Dr Mohamed Zaki was interviewed by Boni Sones during the Cambridge Service Week Industry Conference, **'Bridging to New Service Technology'** on 11 October 2017

MOHAMED: Mohammed Zaki, Deputy Director of Cambridge Service Alliance.

BONI: Mohammed, thank you very much indeed for talking to the industry conference podcast series today at your Cambridge Service Week, Bridging to New Service Technology one-day conference here at the Moller Centre. Tell me a little bit about your presentation, what was your presentation about?

MOHAMED: My presentation was about customer experience analytics and application of machine learning to monitor and manage your customer experience. The main lesson here, there are a lot of challenges infusing the normal customer experience metrics, such as net promoter score, overall satisfaction, or even the recent metrics which is how to develop an easy service? All of them have same structure, which is rank your service or scale your service in terms of satisfaction from 0 to 10. It's easy, that's why every top manager loves to see the number, but what we came up with from our research does not correlate with your revenues, does not correlate with your customer view when it comes to unstructured data, when you ask your customer how we can improve our services.

One of the key things that we tried to advise here is actually you could capitalize on the date that that you have in your business, the attitudinal data and the behavioural data to allow you to understand your customer better. One of the key things we came out with is actually predicting promoter customers is quite difficult, predicting a detractor and risky customer is quite easier.

One of the key things that came up from machine learning analysis that we did is actually how you rank as well your promoter customers, not all of them contribute monetary to your business similar to each other. It's actually wrong to just classifying your customer into only three categories promoter, detractor and passive. Actually there are degrees in promoters, there are degrees in passive, there are degrees in detractors.

Now, with this insight what firms can do with it, one thing is actually how you can move your detractors and passive customers into promoters. That's a first type of thing, that's actionable for businesses. The second, how you move your lower promoter in the classes all the way up to the upper promoter. We here, we're not speaking about higher scores in attitudinal, actually buy from you more services or products, so they can contribute to the profitability measurements in your firm.

The second thing is actually shall we ditch actually the quantitative number? Because it doesn't make any sense at all, and you should ask a simple question to your customers about how can we improve our services and collect that through unstructured data, because we've proved that from unstructured data we can predict whether this customer is a complainer or actually liking our services or not.

Then the third element, my emphasis in my presentation, there is another level of analysis using machine learning, you can do the sentiment scores, which is positive and negative.

That another simple score, if you're going to go use machine learning saying this comment is positive, this comment is negative or this comment is neutral, actually again it's another simple thing. You have to dig the details inside what the customer is telling you about. To do that, you need to involve some of the psychology type literatures, which talks about discrete emotions. We trained the machines with a lot of discrete emotions, here with talk about joy, surprise, fear, sad, rage. Because sometimes our customers are different when they suppressed their opinions in different channels, some of them reach for the rage. Theoretically it's been proven if your customer is outraged from your service in couple of events he will leave you…

BONI: And it might spread to others.

MOHAMED: And then going to go to the others. Sometimes customer is saying that clearly and loudly in our channel, in the survey, in the social media, and all the levels that we are communicating and saying I'm going to go to that type of competitors. If you want to retain your customers you need to capture all these types of elements.

The last element here is actually the culture. We know that we came from different cultures, given that we are a global business, so we have customers all over the globe. Eastern is different than the Western, I think we trained the model as well to identify those cultures, for example in our example we get two data sets from telecommunications offers, telecommunication companies from two countries, Serbia and UK, but psychology proves that actually that come from Serbia they could express their opinion in the medium level, but that should be treated as a UK, who is actually quite angry from the services.

That means the reactions of the firm has to be different according to the customer, where his background and culture comes from. That is really important in the machine learning, you can train the machine learning to do so if this customer comes from that area, I have to deal with him differently and quicker than the customer who comes from a different area.

The final thought is about actually we should really think deliberately about that one metric is not really enough to allow us to understand our customers. And if we want, back to the speakers type of talks in the morning, they were focusing on how we can build a good user experience service for our customers, so we need to capture that right and a simple score wouldn't do that for us.

BONI: This machine learning, Mohamed, it enables organizations to design and manage unique experiences for their customers, and analyse feedback in what you call a timely manner, it hasn't been done before, it's unique.

MOHAMED: Yeah, it's a really unique, and actually it has a context here, because that is important how you employ a technology to allow us to understand things better. And in that essence it's a customer experience, the human at the end. And you need to train the machine to allow us to understand the human, and that's why an emotional level is important, a cultural level is important, link it to the quantitative number and the sales technique is important, which makes a lot of value for the businesses if they are going to run it.

BONI: It's cross-cultural, its many facets, it's existing qualitative and quantitative data, and it can tell you what actions, what specific actions to take, to increase customer satisfaction, and reduced friction. It could be a mini revolution.

MOHAMED: It's a mini revolution in terms of changing thinking, in terms of how we can monitor and manage. But in simple terms if you can't measure it right, you can't manage it. Basically you need to use all the capabilities that you have in terms of the technology to allow us to understand our customer better, to design the right experience for him. Otherwise other firms will do it for him, and they are going to leave us.

BONI: How widely is this new technology and this new model and framework used now? Have you recently introduced it? Who has adopted it?

MOHAMED: We trained the model with some of our B2B collaborators and our CSA consortium, that was the first data set that we had from one of the researches that we are running with them. Secondly, we try to use those techniques with some of the open data sources from social media, just to enrich the model. And the third use, we are trying to go to different sectors to basically scale that up, and gain a lot of insights in different businesses over the time. It's mainly, at the moment, a three sectors asset-heavy, telecommunication, and the last one is airline services.

BONI: And I suppose it's not just about retaining your customer base, but also getting your customer to really advocate your services about those of your competitors.

MOHAMED: Yes, it's basically how we can get back to the world of delighting our customers. I don't think personally that satisfaction is enough at the moment.

BONI: Or [a ticker alike].

MOHAMED: Or [a ticker alike]. Because basically your competitor can satisfy your customers, so why he chose you to do that? Maybe you are the best to do that, but to keep your customer in your pocket you need to monitor the different interactions and different touch points he talks to you, or he is communicating with your services and all the time how you redesign it, how you improve it over time. To do that, you need some of the machine learning capability to monitor that in the background to allow you to make this happen.

But also another element I emphasize in my presentation is it has to be real-time. Given the digital and physical space that we have, and the capability in the technology, we could capture data in real-time and we can build an architecture that allow us to understand what's going on in the field at the moment.

BONI: Well, that certainly is revolutionary, and exciting, would you say it's exciting?

MOHAMED: It is exciting, thank you.

BONI: Dr Mohammed Zaki, thank you very much indeed for talking to the Industry Day, Cambridge Service Week one-day conference, Bridging to New Service Technology. I've enjoyed it very much, thank you.

MOHAMED: Thank you, I've enjoyed it as well.