



For Cloud Professionals, part of the On Cloud Podcast

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Episode 7: Smarter, faster decision making in Retail enabled by Cloud

Duration: 0:27:22

Operator:

Welcome to On Cloud, the podcast for cloud professionals, where we break down the state of cloud computing today and how you can unleash the power of cloud for your enterprise. Now here is your host David Linthicum.

David Linthicum:

Hey guys, welcome back to the podcast, and we're going to talk more about how cloud computing is related to a couple of things. Number one, the retail sector, and also the emerging world of AI and the world of machine learning, and things like that that are very important to how we deal with the retail sector, how we maximize the retail sector, how we optimize product development, how we do many things are going to be providing value for this sector going forward. And joining me is Jeff Simpson, he is a Principal at Deloitte with me, Consulting LLP, Retail Practice. He leads several Analytics, Digital Data and Marketing Strategy Offerings. Jeff has market eminence and

thought leadership in the Analytics, Marketing Strategy, Loyalty and Database Marketing spaces, and prior to Deloitte, Jeff worked in the retail space and has deep expertise in marketing and analytics. Jeff did I miss anything?

Jeff Simpson:

No, that was a fantastic introduction.

David Linthicum:

So, what were some of the highlights of the things you worked on prior to coming to Deloitte. What's the thing you kind of brag about on the elevator talks when people ask you what you did prior to joining the consulting firm?

Jeff Simpson:

Yes, so I spent the first half of my career running marketing at several large retailers. So, I was in the trenches every day, running campaigns and working with merchandizing in stores to try to hit our comp plans and beat our comp plans, so I spent a lot of years on the client-side throwing those levers and sort of fighting the retail wars.

David Linthicum:

So what would be a retail war that's going on now that was going on back when you're in the space?

Jeff Simpson:

Well, I think the most, the most interesting to me, and I think the most important thing that many of our retail clients have yet to wrap their head around, but really need to more quickly than they currently are, is digital and digital marketing. There's been a lot written -- Deloitte has written a lot about it, the industry has written a lot about this intersection between online behavior and in-store behavior and what we've learned from our work at Deloitte over the last few years is there are some really, almost linear relationships between what happens online and ultimately what happens in store, and that has done a couple of things. One, it's exponentially increased the amount of data you have to look at as a marketer in retail, to make decisions. So that's one, and the second part is it's increased the complexity, and I think this is where things like machine learning become really, really important, because, as you probably know, retail is a really tough business. The e-commerce, the insurgence of pure play e-commerce competitors, is really taking some of the share away from folks that are running bricks and mortar stores and e-commerce businesses sort of side-by-side. And so, it's become really an efficiency play, so you've got to get smarter, you've got to get faster and you've got to eliminate waste, and the reality of sort of old line retailers, is there is a lot of waste, whether its broadcast or direct mail, there's just a lot of waste in the system. Digital makes it far more efficient, if you choose to pay attention to the right stuff, and that's where machine learning and AI and Cognitive and all the stuff comes in. It just allows you to make much better, much faster and much more accurate decisions.

David Linthicum:

So, we're dealing with machine learning a lot in the cloud space, and I think one of the things that really comes up front and center as we're working with clients on machine learning is really kind of finding the right business applications for this technology. So, going forward how do you kind of marry the capability as machine learning with the Business Applications in the retail space?

Jeff Simpson:

Yes I know it's a great question. So the way we found it to be most effective is if you tackle it in terms of the domain that you're choosing to impact. So, in retail there are two or three domains that are proving to be the most productive. One is marketing. We could talk in a little more detail about how it's used in marketing. The second would be supply chain; and the third would be in stores. Now, if you take a large retailer, let's say that has a 1,000 plus stores, that's obviously a highly complex supply chain, and let's assume they're interacting with somewhere north of 100 million customers on an annual basis, right, so there is lot of data there, there's a lot to collect and pay attention to and make sense of, and this is where machine learning can really help you accelerate some of the decision-making processes.

In addition to that, what machine learning has really helped us much more clearly understand is the links between marketing and supply chain and store, you know, those sort of literal links that we all sort of grew up understanding, which is, you know trucks deliver stuff to stores and marketing drives customers into stores. But, in fact, what we're very clearly seeing is, and this is what machine learning is enabling, and cloud environments are enabling is you can now understand more literally what those links are. Let me give you just a quick example. If I'm a buyer at a big retailer, and I'm buying a million red sweaters, a million yellow sweaters, and million green sweaters, I'm going to have to make a decision as to how many to buy, but I also have to make decision where should I flow those goods. Where do I think the demand is going to be? So what we're finding using machine learning with some of the cloud platforms is that the online behavior is actually predictive of what's actually going to happen in store. So we're seeing and helping several of our clients begin to say, "Okay I have these red, yellow, green sweaters, I'm going to put those online and wherever I see the

most heat or the most traffic around this. I'm going to flow those goods to the stores associated with where I saw that online activity." And, as a result, you're making better assortment decisions, better flow decisions on where you put the merchandise. That leads to fewer markdowns and more sell through, which makes for a more profitable business. Did that make sense?

David Linthicum:

Yes, yes it does, it does and so it kind of leads me to the next question. So, retailers are using machine learning across different functions and domains and I think some of the things I'm observing with my retail clients is that this used to be about making tactical decisions typically, so it was about figuring out logistics things like that how you do things around apps. Now it's really getting into functional demand creation. It's able to react and respond to behaviors of clients and their ability, and I think you just drew up on this issue, and so what are the different domains that are, that are working in the retail sector, who is doing what with machine learning and what's an example of success?

Jeff Simpson:

So we have -- it's actually an example that we enable and continue to support. We have a large retailer, that they understood that their customers are getting older and they had to attract younger customers, and so they said we need to develop a part of our assortment to serve that young customer. Younger customers not surprisingly tend to be very fashion conscious, very fashion forward. They're all about the latest trends, right? Social media and all this connectivity has made it, has made things like fast fashion much more prevalent. So in the old days and the old traditional categories, a buyer will buy something six months out. It will get on a ship, they will ship it over, it will get into the DC, it will go on trucks, it will get into your stores six months later, so there was this sort of six month lifecycle from when you bought it to when it actually showed up in stores. But today, with the increase sort of in speed, especially in these fast fashion categories, you need to make those decisions within 30 days. So, what we did is we worked with one of our clients and they went to their sourcers, the folks that source their products, and the folks that cut and sew their products, and they worked out a supply chain, an alternative supply chain, that allowed them to make decision within 30 days. So, the buyer could buy it and it would be in store within 30 days. So, they basically reduced the time it took to get the products. Then, what they needed to do was make decisions around what features and functions should we be building into these products on this shortened timeline. Should it be a gold zipper, should it be a silver zipper, should it be buttons should it be sewn this way, should have had this color of fabric? And, so we shortened the supply chain time and then built for them basically a portal that monitored social media activity such that we could process what was happening in social media, we could recognize the trends much more quickly, feed those trends into the supply chain, this abbreviated supply chain, and cut and sew those goods and having them in store within 30 days. So, if a particular trend was really hot on social media, if they were seeing that was very hot on top of your culture we could literally print, sew, cut those shirts, and have them in store within 30 days of seeing that trend and take advantage of those trends, and as a result attract a younger customer in store, and that activity continues today.

David Linthicum:

So, what about the marketing end the demand creation side, so what can machine learning in the retail space kind of teach us how to do that better over time?

Jeff Simpson:

Yes, and this is, in our opinion, the lowest hanging fruit, as it were. This is probably the most prevalent application of machine learning in retail, and frankly the retailers aren't fundamentally early adopters. They're generally fast followers, but machine learning is absolutely taking hold in marketing to a greater extent than probably any other domain in retail. And the reason is pretty simple. I talked a little bit earlier about my background as a marketer in retail, in the old days we would run a TV ad. We would -- and, by the way, the old days was only like six, seven, eight years ago, but I act like I'm eighty years old. But the way it used to be done was, we would run a campaign broadcast, newspaper, advertising, maybe direct mail supporting it, we would run that campaign and will we get an 8% response rate on a given campaign. And an 8% response rate means 8% of the people we sent the message to responded—came in the store and actually bought something, and we'd all high-five each other say that's a great response rate, that's a great return on investment. But the reality is we didn't know what the other 92% of the people did. So in the case of direct mail we knew that at least 8% of those people opened the mail and actually came in and redeemed the coupon we sent them, but we had no idea what happened with the other 92% of the people.

Today, with email and digital marketing you know, you know what your open rate is. You know what's your click through rate. You know how many people engaged with that messaging and then chose to come in store. So now you've got a much more sophisticated understanding of things like not only open exposure rate, but things like click through rate and what did they look at, and how long did they stay on the site, and how long did they potentially interact in the store? So now you've got to synthesize things like this direct response data from the e-commerce platform. A lot of our clients are beginning to adjust things like location data. They've always used transaction data. You can now synthesize all these disparate sources and make sense of what did that journey look like? And what's been

really exciting to me as a sort of traditional someone who grew up in traditional retail is we're now understanding what's the conversion rate in store. What we've known online, right, if a big retailer sees a 100 million people a week on their site and they have a 2% conversion rate then that two million people actually bought something, but nobody really pays cash, and what the other 98 million people are doing. Now you can, if you choose to pay attention to that you can, and machine learning and Cloud Platforms and such help you process all that stuff and make sense of it and then synthesize it with all these other data sources such that you get the type of learning that allows you to make a better decision next time.

David Linthicum:

So what about the ability to automatically adjust marketing to kind of adapt to changes and behaviors that are out there, is that something that's going on or is that too far into the future?

Jeff Simpson:

No, it's absolutely, I was actually at one of our large, one of the largest retailers in the country yesterday with their CMO, and we spent about a half an hour on this topic. They were actually building a nerve center that takes advantage of machine learning to execute what are called programmatic buys in digital. So programmatic buys are very focused, very technical, very opportunistic marketing campaigns. So, rather than buy an ad where you get exposure to a 100 million people, I'm literally, by the minute, taking advantage of activity that I'm seeing online and putting my advertising in front of that activity, right, interacting with those consumers. Programmatic buys, rather than one big media buy, I'm literally buying hundreds of thousands of small little buy that add up to a big media buy, and in doing so, I'm much more efficient with each of those little buys. I'm more granular, I'm more personalized, I'm more relevant, based on the activity that I'm seeing. You can't do that manually. I can't get a million impressions over a one hour period manually unless I just buy one big Broadcast Ad. To do it online, I've got to buy those one by one by, one by, one that's what machine learning helps enable that.

David Linthicum:

So in other words marketing is not just a TV advertisement, magazine advertisements anymore, it's just this very complex amount of ways in which they can have impact, or how people could have a perception of a product or service, and the ability for that product or service to adjust the way that it's marketed, adjust pricing, adjust things that are more attractive, for the people who are looking at those particular products or services probably the way that win with marketing or going forward is that really close?

Jeff Simpson:

That exactly right. That's really well articulated. I think the benefit of it is you win more. You convert at a high rate to sell more, but more importantly, if I understand what's important to you as a consumer, if price isn't important to you, I don't have to give you a discount, right? If the most important thing to you is that I get it by tomorrow, because I'm attending a birthday party, I need to have this gift, then I could actually more money on you, because what's driving your purchase isn't a coupon, it's when you get it, right, so these campaigns now are built on a one-to-one basis and they roll up to a big campaign but it's really a million little campaigns running at the same time, and obviously that can't be done manually..

David Linthicum:

So how does customer interaction across different channels, create the use case for machine learning. So, basically, are we looking at behaviors, are we looking at patterns, are we looking at gathering lots of information that machine learning can discern?

Jeff Simpson:

Yes, increasingly these decisions, if you think about the example we just talked about, it was sort of real-time marketing the programmatic buy where I'm running a million person campaign one consumer at a time, a lot of that is being done real time. So when I land on the website the experience you present me as a kids buyer is going to be different than you present to my son who may be interested in video games, or my wife who may be interested in women's ready to wear and cosmetics right? So the experience that I get on the site is bespoke, it's custom, and that can't be done manually, that's got to be done based on, it's being done both at - what we call the micro segment level, and those are really business rules that say if the customer does A, B and C serve them D right? So it's not really, I'm sitting and observing your behavior, it's more of sort of the decision tree that says that they do this, and they do this, and they do this, then they likely to fall into the segments so let's create that experience for them.

Jeff Simpson:

There are a lot of campaigns now that are real-time that are going beyond just sort of business rule campaigns like the one I just described where they really do recognize Oh! this is Jeff Simpson of Clover, South Carolina. Wow, we know this guy, we know the last 10 transactions with us, we're going to personalize this experience to him, so really will truly be on one-to-one, versus a microsegment interaction, and again to enable that, you cannot do that manually, you have to take advantage of some the machine learning capabilities that are most prevalent right now.

David Linthicum:

So right now, speaking on machine learning, and you know, talking about the retail space and the banking space, and things like that, and being able to take almost this innocuous, this is simplistic data, and turn it into something that's, that our companies are able to take actions upon in discounting things, things like that the ability to create demand popups, those sorts of things. Is there going to be a saturation point where we just know everything about the consumer and their ability to market, the consumer won't have any anyway to progress because we're just so good at it and everything is so automated and these machine learning Knowledge Engines have become so smart that it's almost something where we can't find any additional capability or any kind of ability to create more demand in the market, or any in the ability to sell more in the market. I mean where do you see the limitations?

Jeff Simpson:

I don't. It isn't -- in my opinion, limitless, and I'll give you some examples. One of my main clients, I do a lot of work with them and they, for example, and I've spoken very publicly about this, we're starting to see, because of the smart speakers that are showing up, we're starting to see people begin to search now with voice instead of typing into the search bar, right? And the way people search verbally versus in written form is fundamentally different. It is, it is almost 180 degrees difference in terms of how you search, and so the point there is that, as the inputs change, as the interfaces change, it's going to change the type of data that you have access to make decisions on what to serve up, so if I'm getting a type search versus a verbal search I've got to make very different decisions. I have different datasets in which to draw to make decisions around what the customer wants. I don't know what's next; it may be visual, right? I may just start to look at stuff to search for it instead of type or verbal, but there will always be the next thing coming down the line that we've got to wrap our heads around and figure out how to plug into our business process and our technology platforms. So I don't think there are limits at all. My father was a New York advertising guy for years and years. There was a time when broadcast was it, right? Broadcast was the answer to everything, but as digital became more prevalent, broadcast became less and less important. Not unimportant; it didn't go away, but the complexity of the marketing mix gets more and more difficult every year, right? So, this - this dynamic is why I don't think there'll be limits on this anytime soon.

David Linthicum:

Yes, so we are progressing, but the thing is we're still you know had a very primitive stage and our ability to kind of understand digital and spot behaviors and deal with patterns, because I guess we are just getting the knowledge engines in a learning mode correct?

Jeff Simpson:

That's exactly right, and it's never binary, it's never... e-commerce is a great example. So, it started on desktop, then, all of a sudden, tablets showed up, right, and wait a minute, then phones showed up. Now watches are showing up. So there is, and you can't ignore the desktop business, right? You can't just say well I'm going to stop serving the desktop. That's still part of the mix, so it just it's additive, right? It just fractures across more and more channels and you can't ignore the old channels to take advantages of the new ones. You've got to add it into the mix, and that's why I think we've reached an inflection point around things like machine learning, because we are, in terms of limits, the limit in the system right now is human interaction. You just can't do this manually. You've got to have the support of machines and cognitive and AI and all these little things in order manage the complexity that exists today.

David Linthicum:

So it's the obvious question are retailers becoming data scientists? (0:21:00)

Jeff Simpson:

Sadly no. They're not because retailers, again, are not...they are fast followers and not really adopters. There is definitely an awareness within retail and consumer right now, that they've got to get better at this, but there is a lot of old muscles that you have to unwind. The retailers that I talked about yesterday shared with the - that in addition to his team of 300 people who build campaigns domestically, he is now building an offshore capability of more than 1,000 people to run his programmatic campaign, so he recognizes these are skills that his current team doesn't have, but once again you can't just shed your current team and go all for machine learning. You've got to do both. Now, will the mix change over time? Probably. We'll probably lean more heavily on Data Science going forward, but you're still going to need the sort of the core marketer knowledge (0:22:00) that will never change, so it's more about how do I mix and match these things than it is just flip on a binary basis.

David Linthicum:

Yes, so moving forward, and obviously this is On-Cloud Podcast, and I think cloud is the big enabler, or equalizer, so to speak, with the ability to access this technology. When we first got into AI technology years and years ago, it was just out of the price range for most of the organizations out there, and now it's becoming kind of the big equalizer for allowing folks that typically aren't cash rich, and you mentioned the retail's fast followers, and I agree with that to leverage technology they couldn't afford, or get into place, or even think

about using, and now they have the capability of using this technology how does that change the retail field?

Jeff Simpson:

Yes, it's really been interesting as someone who grew up in a more traditional, world than we live in today, it's not that retailers aren't adopting it but the retail, I mean if you think about the sort of fundamental basis of retail, I'm going to buy something for \$2 and I'm going to sell it for \$4, right, and there is this implied value add somewhere in there. I curated the assortment, I brought it closer to you. As a retailer, I'm doing something to enhance the value of that product, and you're going to pay me more as a result, and so there has always been this sort of the black art of merchandizing, the black art of marketing in retail, and it's tough to put your finger on it, but there has to be some value add in there. So, I don't think this is just about getting you the right offer at the right time, right? It's not just about the mechanical element. There is still a heavy element of art within this that needs to exist. So, I think what we are going to see over time is you're going to see that new retailers are increasingly coming out of the e-commerce space, which does tend to be more mechanical, but they are learning the art of things like bricks and mortar and curating assortments locally, and those types of things, and they're developing new muscles. So, the retailer in the future is more data science focused and is more technology focused, but there is still, at its core, we used to call it the merchant prince where I grew up working at. There is this art of knowing. I'm going to find that because lots of people are going to want it, and I'm not sure you're ever going to be able to have a machine do that better than a human. We'll see.

David Linthicum:

So, are retailers becoming more technically enabled to a large degree in just the last five years, or is it me dreaming of something here?

Jeff Simpson:

No, absolutely more technically enabled. They've had no choice, and as they've all stood up e-commerce businesses, they've had to wrap their heads around the requirements to run an e-Commerce business, the way you manage the order management system, the way you manage the content management system. sources. You just think more technically about a lot of stuff that they've done historically just through gut.

David Linthicum:

So tell us where are we going to be in five years? We're having this podcast discussion and five years away in time into the future. So, what are we going to be talking about then in terms of retail and using machine learning and cloud computing and all the different technologies out there?

Jeff Simpson:

Well, my hope is that in years from now the customer experience, the way you interact with the retailer, whether it's a pure play online retailer, or omni-channel retailer, or a bricks and mortar retailer, my hope is that interface, that interaction with the consumer, will be more bespoke, more customized, more personalized, and the assortment will be as such as well, and the experience will be better. The reality of much of retail today is it's still very, very, clunky. Many retailers are just now beginning to wrap their heads around how to integrate the digital business with the bricks and mortar business. My hope is that five years from now, that experience is much more integrated and maybe I'm saying that – maybe I'm coming from a selfish place and saying that, because there is something amazing about shopping on a Black Friday or walking down a street seeing a great item in the window that you didn't even know you want it, and just this, the whole notion of discovery—that's a great experience—and it's experience we know customers value, but unfortunately over the last, I would say six or eight years, many retailers have sort of lost sight of that, and maybe gone too far to the mechanical side. So, I hope in five years from now the retail landscape is a little more balanced and the customer experience is significantly better than what it is today.

David Linthicum:

So where can our listeners find more information about you and your group. (0:27:00)

Jeff Simpson:

We have lot of this IT that we do a lot of customer research. I run a capability called The Center for Consumer Insight. We're buying hundreds of billions of dollars of consumer purchase behavior. We're buying a lot of location data, we're buying sentiment data, we're buying and persisting all this data to understand what's happening with the consumer, not yesterday, not in a rear view mirror sense, which is the way most retailers have done it, but we're trying to better understand how do we look ahead and understand how they're going to behave, and how some of these forces are changing their behavior and a lot of that we've published and it's available on Deloitte.com.

David Linthicum:

That's great, well it's great having you on the podcast hope we have you back again sometime in the future to give us an update on machine learning, Cloud Computing and how it's working in the retail space.

Jeff Simpson:

Thank you very much. I really appreciate what you do. I'm a big fan of yours thank you for giving me some time today.

David Linthicum:

Thank you, sir.

Operator:

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