



ACCENTURE-AI-EFFECT- CUSTOMER SERVICE TRANSCRIPT

Amber: So you have a startup with just a few employees, or maybe it's you and your laptop, and you've been thinking artificial intelligence is all well and good for the Amazons and Googles of this world, but it doesn't really mean that much for your business

Jodie: Or maybe you're not a startup, but you look at the scale and resources of those tech giants, and you despair.

Amber: Fear not. On today's episode, we're going to talk about the way you can make it work for you right now, and hopefully, you'll find some of these examples will inspire you to figure out how machine learning might help your business do what it's already doing, but just better.

First up, you're going to meet a startup you may not have heard of, Heyday, and then a feature interview with David Lennie, who was the senior VP of data science at Canadian tech powerhouse Shopify and also the man responsible for democratizing the powers of AI for the small merchant.

This is the AI Effect, the podcast about artificial intelligence in Canada. I'm Amber Mac.

Jodie: And I'm Jodie Wallis. First up is Étienne Mérineau in Montreal, the cofounder and chief product officer at Heyday AI.

Étienne: Essentially, we help retailers connect with customers on a personal level, helping them go through the entire customer journey from product resource to purchase to customer support.

Jodie: Étienne, tell us a little bit how you're using AI in Heyday.

Étienne: That's a really good question. I mean, we use it in a variety of ways, but mostly it kind of acts as a customer-facing AI, doing the first lead qualification triage, and then we escalate the conversation to the right human.

For instance, we had a client in the sportswear world, so if a question is about golfing and the AI cannot handle it, it will escalate it to a golf expert at the brand. Then we can learn from these interactions.

On the flip side, on the agent side, the AI works in a way that it gives recommendations to be more efficient. Our model is basically like giving superpowers to your sales and customer service teams. It works both ways, customer-facing and agent side.

Jodie: So, Étienne, sometimes or often in the media, chatbots get a pretty bad rap. They don't understand what consumers are saying. They aren't able to use any sort of intuition, and they give kind of canned answers. What makes your capability different?

Étienne: Yeah, I think you're right. They kind of deserve—he first-generation bots were kind of dumb and useless for the most part. For many reasons, but I think number one is that they weren't really connected and tapping into the data that's available. Or in some cases, the data was unavailable because it was poorly structured on the business end of things. At the end of the day, data is the fuel of AI, so for AI to truly deliver the value, it needs that supreme fuel, if I reuse my metaphor. It needs to be fed with that quality data. For quality data to emerge, well, you need to first open up the communication channel with customers.



I think bots, early-days bots kind of suffered from that chicken and egg kind of paradigm, where you need that data first, and you need to open the conversation. Our model is basically to open up the channel and have a hybrid of AI and human agents. That way, you can cover 100% of the spectrum. If the AI cannot process the question and answer it, it automatically escalates to the right agent. Then we can learn iteratively through time. It's kind of the best of both worlds. For customers who are expecting an instant response, the automation can do the trick, but if it's too complex, too personal, too sensitive of a question, we escalate it to the right agent.

Amber: I feel like you should write an article called Bots Gone Wrong because there are a lot of bad bots online, to Jodie's point. Can you talk a little bit about where you see businesses making mistakes when it comes to creating their own bots?

Étienne: Yeah. I mean, that's a good question. There's a list of things and best practices. I think number one, I would encourage any business is looking into AI or bots or call it the way you want, but to really start with a scoped-out use case, business case, for example, automating your FAQ section. Even if you have an FAQ section on your site, well, people sometimes are impatient. They're not going to find it. They're going to ask the question in live chat. We see these redundant questions coming in all the time. That's a very scoped-out use case, and in this sense, when it's very specific, AI can do a good job. The number one pitfall, I would say, is businesses trying to be too broad, or trying to attach too many verticals or business problems. Then the AI kind of fails at each of them, so focus on one single thing. That would be number one.

Number two, more from a conversation design standpoint, I believe that we should be fully transparent between— if I'm talking to a chat bot or an AI assistant, I want to know that I'm talking with a machine as a customer. I don't want to be misled. That kind of created the early days frustration as well because if I'm chatting with what I believe is a human being, I'm happy to have an instant response.

But if there's no real value in the exchange, if the AI doesn't understand me, and I thought it was a human being, I really feel like, number one, you're an idiot, and second, it backfires. It creates the opposite effect where I'm actually not going to be loyal to the brand. . I'm going to go shop somewhere else.

Amber: Can you give us a specific example of a client that has worked with you in terms of how they've been able to use your services to either increase revenue or maybe it's led to more customer satisfaction?

Étienne: Yeah. I think one I could share right now would be it's a local renovation center store chain. They have 21 stores in Quebec. They're called Patrick Morin, so it's like a small Lowe's or Home Depot, but they're still fairly big. I mean, they have 40,000 products, so you can imagine the complexity. In their case, since they're a small brand, their business case was to differentiate by providing a more personalized service. That said, they only had two people at the HQ who could work full time on delivering that value through live chat with their customers. They needed AI to come help them.

I think it was in eight weeks, we managed to automate 60% of the FAQ. The remaining 40% would go to the two people who are working, are dedicated full time to live chat. As you can imagine, we keep training the AI based on some of these interactions. For them, it saved them from hiring an extra two people, and it gave them an edge in terms of customer satisfaction because the service was more personalized and timely.

Jodie: I think Étienne makes an excellent point. We've talked about many times the fact that data is the fuel for AI. Étienne puts a fine point on it by saying that what we really need here is premium fuel in order to deliver premium experiences to our customers. But the way to get that premium fuel is to open up the communication channels and let the AI have multiple conversations with customers. In that way, it learns. It gets smarter. It has more supreme fuel or premium fuel. Then at that point, the conversations start to become a lot more intuitive, a lot more fruitful,



and definitely start to feel a lot more human.

Amber: Absolutely. I think there's probably a lot of frustration, especially with small businesses that are experimenting with things like chat bots. They don't get the results that they want. It reminds me of maybe the mid-1990s when people were building e-commerce sites. They thought, "Oh, no one's coming. I'm not making any money from this." I mean, if you were to just stop then, you would lose a lot of that potential income that came down the road when people were ready to shop that way. I think it's just a point with AI that all businesses need to adopt and test. Also, they're going to run into times when it just doesn't work. There's failure involved in that process as well.

Jodie: I love the analogy with e-commerce because not only was it sometimes difficult and buggy, it was also often more expensive than commerce in retail stores. But again, imagine if we stopped there, and we didn't recognize that we needed to continue to plug away in order to achieve the benefits that we sort of intuitively knew would come.

Amber: Absolutely. Probably no company is more synonymous with helping the small-business entrepreneur than Shopify. From humble roots in Ottawa as a small online retailer, it's now a global giant that hosts billions in transactions every year for small merchants all over the world. We spoke with David Lennie, who was their senior VP of data science and engineering. He took us on a far-reaching discussion of Shopify's strategy to put the power of big data and machine insights into the hands of their customers, as well as what Shopify's success says about the Canadian tech landscape.

David, thanks for joining us. What does your role at Shopify encompass?

David: I lead all the teams that work with big data, applied analytics, algorithms to unlock latent value in data to make entrepreneurship and commerce easier for our merchants and our partners.

Jodie: What are the major use cases you're focused on then when it comes to machine learning?

David: The way that we like to think about it is, since we are a commerce platform, and we help entrepreneurs and small-business owners build and develop their business, we like to imagine that when they start their business, they have this bucket that is filled with dollars and minutes. Those are all the dollars and time that they're going to have to build and expand their business.

The problem is the bucket's usually leaking. It's leaking at all the points in their business where they make decisions. Our job with machine learning and data is to identify those leaks and either plug them or figure out ways to replenish the lost time and the lost dollars faster than they're being lost so that the merchants can live to sell another day.

Amber: You have launched a number of machine learning and AI-based products at Shopify over the past couple of years. I'm thinking specifically about products like Kit, which is a virtual assistant, as well as Shopify Capital, which allows for merchant cash advances. You are also getting more invested in terms of algorithms that can help to detect and prevent fraud. Can you talk to us a little bit in terms of how you measure the success of these products?

David: Yeah. The thing that we really look at with every one of these algorithms as being successful is really how much of that waste, whether it's dollars or minutes, are we recapturing. In the case of our order-fraud algorithms, which you pointed out, there is constant loss for merchants who are exposed to chargebacks, so fraudulent transactions. That is money just walking out the door. When you're a very small business, and you have really very fixed resources, particularly capital, that's an incredibly important problem for us to go solve.

There, we focused a lot on making sure that we had very good hit rates for identifying fraud.



Importantly also, we reduced our false-positive rate. We saw that the original algorithms we were using were a little bit too conservative, and so we were turning away more sales than we needed to. We've gotten much better at that so that our merchants can make confident choices all the time using our fraud algorithm. I'd say, in every case, we look for how many minutes did we save or how much money did we give back to them because our belief is that if they get that time or that money back, it goes into a business growth investment. That's either more marketing campaigns, more products on the shelf, more time interacting with their customers. All of that is a better use of that time and that money.

Jodie: For Shopify, it sounds like data and the ability to access large amounts of data and make decisions based on that data is opening you up to be able to engage in new businesses, so traditionally, a commerce platform now getting into financing. Talk a little bit about that.

David: What we saw with— our product is called Shopify Capital. The way you can think of this, we give a cash advance to merchants. This came from— over the years, we had heard from a lot of entrepreneurs that they would reach these sort of existential points where they had achieved some growth, but to hit the next level of growth, they needed to have more money, more capital on hand to order a larger amount of inventory. They were sort of stuck in these plateaued places where, if they just had a little bit of a boost, they could reach the next level of growth.

That's really how Shopify Capital was born. That's even why we call it a merchant cash advance is that we're not making a loan. We're basically getting skin in the game with them. We use data and algorithms to figure out who we think have the right behaviours of a successful merchant. Are they tending to their business every day? Are they putting products on the shelf? Are they interacting with customers? Using all of this data, we know what success looks like after having seen it hundreds of thousands of times over the years. What we do then is we offer them that boost they need to reach that next level. We get paid back when they succeed.

Amber: It's interesting just to see how Shopify has evolved in terms of leveraging data and also using artificial intelligence and machine learning. To the end merchant, is it obvious to them that you guys are at the forefront of using the latest technology? Do they care? What has been the response in terms of how the data is being used?

David: Yeah. That's a great question. So far, we have not marketed any of this. We just simply uplevel the experience for everyone on our platform. That's one of the things that gets me very excited is— I've been in big data and analytics since the late '90s. Early in my career, a lot of the kind of work that we're doing now at Shopify was being done, but only for the wealthiest companies in the world.

What's exciting is we can essentially add this kind of high-powered applied analytics, the algorithms, the AI, to the platform and spread that investment across everyone. Everybody gets better from this work. Examples like the order fraud, that's just an investment that we made because as soon as we solved that problem, we solved it for everybody on the platform, whether it's a brand new merchant just starting today, someone who's been here for a decade, someone who's very large. That investment lifts everybody up.

Jodie: What about the end consumer, the consumers of the merchants? How do they benefit from these investments?

David: I think that if you think about what I said earlier, that we are giving time and money back to the merchant, if we weren't doing that, what ends up happening over time is a merchant would probably be forced to charge higher prices. If we can help them reduce the costs of doing business, they can continue to grow, but also importantly either to keep their prices low or even to reduce prices over time. We really invest in a way that ultimately rolls out to consumers in the world as well.

Jodie: There's been a lot in the news recently about data, both on the privacy side as well as data bias. How do you deal with that at Shopify?



David: That's a great question. I think the most important thing is that the people working with data start with a conversation. That is, within your data and algorithm teams, having an ongoing discussion to make each other aware of the risks of bias in machine learning or any of our models. I think anybody who thinks that they have this all technically figured out probably doesn't understand the problem enough. I think the best places are actively talking about it. We've been actively talking about this since the time I arrived. We even have our own machine learning Code of Conduct that our employees have written.

Back in that example of Shopify Capital, the thing that we think about is: How will the output of this algorithm be used? What are the stakes involved in what comes out the other side of this? Does the recommendation or the score that we're providing open a door of opportunity or close one? If you think about cash advances or loans in traditional banks, we worry a lot about the data that could be used to power that kind of algorithm that itself may be full of systemic or structural forms of bias and discrimination.

In the loan world, if you are pulling a lot of information that is geospatial or based on where people live, clearly there's been structural forms of discrimination that have pushed people of different socioeconomic backgrounds and race into different areas of the world. That is very actively something we've been thinking about and talking about since the very beginning of Shopify Capital.

Jodie: A couple of really interesting things in there, Amber. One is, David is pretty clear about the fact that if companies are not actively talking about the risks of bias in their machine learning, then they're wrong. Because those risks do exist, and issues can arise. The second thing, it was really interesting to hear that Shopify's employees have developed a machine learning Code of Conduct.

Amber: Yeah. I think that's really fascinating, and I think it's something that the industry really hasn't seen at this level. In many ways, it reminds me of Netflix. Netflix, a few years ago, came out with this culture deck that really

became the staple, almost like a bible that everyone online was reading, to understand how to get culture right. You could see the same thing potentially happening with Shopify with this machine learning Code of Conduct, is that it becomes an industry standard.

Jodie: Going back to the question of consumer expectations, consumers, we know, are demanding a lot more than they ever have. That's based on their experiences with other companies like Netflix, which you just mentioned, or Amazon. I asked David how he sees that evolving and what impact it has on the strategic direction for Shopify.

David: I think that in so many ways, Shopify has already been so focused on being on the cutting edge of applied technology in the context of commerce that I think that what we see is consumers' expectations are raised as they become even increasingly aware of how data and their data, a fingerprint of their data signature, is leveraged in the world. They're rightfully demanding that that be a value exchange, that if they're going to offer data, there needs to be clear and obvious value for them in return. I think that's something that everyone understands.

In a lot of ways, I see that really as just another form of commerce. You have to give to get. The companies that are not doing a good job of delivering value when they're receiving that data are the ones that really need to change their strategic direction. Shopify has always been in that position. If anything, we feel like the world is coming around to where we were already living in terms of how we use technology in the world of commerce.

Amber: What is Shopify's long-term AI strategy? Is it buying businesses or building tools or a combination of both?

David: I think it could be ... Obviously, there's lots of good alternatives out there. Clearly, what we've been doing within my own team, we have more than 160 data scientists working in every area of the company right now. We're making big investments in developing this muscle and capability ourselves.



The way I think about the applications that we can and will build is ... I like to say instead of artificial intelligence, I think of it as augmented intelligence. We're finding this to be such a huge game-changer and return on investment when we apply some of these techniques, like machine learning, to large-scale problems that entrepreneurs and small-business owners face every day that I think we're going to continue to augment their intelligence by doing some of that heavy lifting for them whether it is in the world of fraud— you don't need to become an expert fraud analyst. Let us do that work for you. If it is in recommendations for the themes or the apps that you need to use in your store, if it's recommendations for the best marketing channels to use.

Those are all examples where, if an entrepreneur had unlimited time, then they could make the best choice, but nobody has unlimited time. We are able to scan all of those pieces of data and those options for them rapidly and at scale to help them make the best choice today and will make a better choice tomorrow.

Amber: As you continue to grow, and you mentioned having more than a hundred people on your team as far as data scientists, are you concerned about not being able to find enough talent as Shopify also continues to grow?

David: That's always a hard problem to solve. I think that it was hard to recruit when I was in Silicon Valley. It's hard to recruit here. I think it's hard in technology. I don't see it as any more difficult being in Canada.

In a lot of ways, I find that I have a lot of new ammunition that puts me in a stronger position for recruiting the best talent around the world. Again, this is such a hotbed of the best cutting-edge thinking and applied analytical research in AI and machine learning that that's a huge draw. That's why we focus so much on really making everyone aware of that.

I think also Canada is in such a strong position from a quality of life and also being a nation that is known for being inclusive and multicultural. All of those things to me are

maybe not completely unique selling points, but they're big, big selling points when you look around the world, maybe in Silicon Valley, where the costs of living are very, very high, and there's clearly been a change in some of the, I'd say, the atmosphere around immigration. I think Canada is well positioned to be the nation in the world where the best and the brightest minds in every type of role will be welcome here and find it easy to contribute.

Amber: Very cool. Well, listen. Thank you so much for joining us and taking the time to chat with us. It was very interesting, and I think you did make machine learning sexy again.

David: Excellent.

Jodie: Thanks, David.

David: Thank you.

Jodie: It was great to talk to you.

Amber: Thanks so much.

One note, since we recorded that conversation, David has left Shopify. We're sure that he's up to some great things.

In our next episode, which happens to be our final of the season, we move to another Canadian tech story that's getting global attention, the ambitious plans to develop a digital city from the ground up with Google Sidewalk Labs. We'll also hear from Toronto mayor, John Tory, on how exactly that works in the real world of rough and tumble politics.

Jodie: We'll get into some meaty issues around data, privacy, and making cities more affordable and livable around the world. We'll talk trash and transportation and where people ultimately want to live.

I'm Jodie Wallis. Thanks so much for listening.

Amber: I'm Amber Mac. You can find out more about the topics we've covered in this series by going to our website, theeffect.ai or accenture.com.



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