

The Dynamic Future of Customer Service: How Machine Learning Will (Finally) Make Business Personal

by **Greg Ablett** | January 6, 2017

It's no secret that brands have been trying to make business-to-consumer interactions more personal, and it's also no secret that the B2C relationship is far from monogamous. In order to facilitate choice, convenience and control, brands have used data to categorize (or "bucketize") customers in any number of segments and act accordingly. For example, looking at a laundry list of factors and behaviors, "Joe's characteristic make-up is A, B, C and his behavior patterns are predominantly G, P, X and Y, so we know that we'll have pretty good luck engaging him in these ways..."

But business analytics and, specifically, machine learning are turning the proverbial "dating" game between businesses and consumers on its head. Instead of assembling interactions based on preconceived notions about how consumers want to be treated, machine learning enables companies to deliver truly personalized communication based on up-to-the-moment data: "Joe is uniquely Joe, and right now, he needs 1, 2 and 3." Smart, fast and personal. Boom, boom, boom.

Let me explain it a different way

Data big and small has already been transforming the way brands interact with customers (or prospective customers) – whether it's remarketing ads for the shoes we abandoned in our online carts, curated playlists based on our listening preferences, or automatic notifications to refill our prescriptions based on our typical use.



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Virtually all industries today, from retail and media to financial services and utilities, are progressing the ways they use data to engage consumers and facilitate easier self-service long before they visit a website or come in-store. Each purchase we make, website form we submit and phone call we place to a help desk generates more detail that businesses can use to predict our behavior and drive increasingly connected and perceivably personalized interactions.

Faced with an endless array of data points (location, time of day, purchase history, gender, payment type, etc.), most brands have been trying to distill that information into a finite number of customer journey trends – to put us in metaphorical boxes with other “customers like us.” But thanks to advances in and broader awareness of machine learning, we’re on the verge of a fairly radical shift. Rather than making the masses align with a predetermined set of buyer segments, companies will begin to seize more collective context and intelligence to dynamically tailor any interaction down to the individual using an ever-deepening pool of historical and real-time data.

How machine learning works

Though it’s been studied since the 1950s and applied by our nation’s military and intelligence agencies for decades, machine learning has only recently garnered modern appeal in the business world as a critical stepping stone toward applied artificial intelligence (AI). Corporations are now investing in the applied science to enhance consumability and service, while differentiating their brands and creating unparalleled cost-leverage. Using advanced algorithms and complex equations, machine learning technology combs through massive data sets to identify patterns and uncover answers without human decisioning or effort.

Machine learning provides the foundation for concepts as new and niche as self-driving cars, and as commonplace as online search. The U.S. Postal Service was one of the earliest mainstream adopters, using machine learning to read the handwritten addresses on our letters and packages. This type of computing demands more than static databases and linear IT infrastructure; instead, it requires “neural networks,” or interconnected processors capable of building, absorbing and experimenting with diverse data sources – not unlike a human brain. The more data that flows into these networks, the smarter they become, drawing on historical information to feed criteria for the next best actions.

Whether we realize it or not, we are starting to see this in action on a daily basis. When we misspell a term in Google, for instance, the search engine usually directs us to results for the correct word or phrase. (“Did you mean ‘X, Y, Z’?”) By using applied meaning versus literal meaning to understand each letter, syllable, word and possible sequence of search terms, Google predictively and proactively compensates for our typos all the time.

For brands today, machine learning no longer represents a far-fetched possibility, but a strategic resource to deliver the ultimate convenience, speed and overall experience to consumers and improve business profitability.

A new frontier for customer experience lifecycle management

Machine learning's potential to upgrade the customer experience with any brand is boundless. By harnessing the information most B2C companies already have at their disposal, they can go beyond simply delivering strong multichannel engagement to prescribe the optimal user-experience. Implemented correctly, this type of technology can predict and proactively address customer questions or concerns – eliminating the time spent fumbling with a complicated phone menu or navigating an unwieldy website.

Take interactive voice response (IVR), for example. Tactically speaking, one might start by sifting through historical data to build a library of distinct call prompts and responses to cover the most common reasons why a customer would require service or support. Additional insights around customer interaction type (billpay, shipping update, appointment confirmation, etc.), geographic location, demographics and historical behavior can then be analyzed to determine the ideal sequence of prompts to present. Brilliantly orchestrated algorithms will learn from every customer and interaction, constantly refining event correlation and prompt sequences to present the next best action for each individual caller – making self-service quicker and infinitely more personal.

Machine learning's applications aren't constrained to distinct customer channels like voice, Web or SMS/text. After a caller pays his bill balance via an IVR system, he might automatically receive a text message confirming the successful transaction. Similarly, a well-connected communication ecosystem may note that an inbound call is from someone who previously attempted to set an appointment online, and instantly redirect them to a scheduling prompt, bypassing the, say, nine other menu options.

Proceed with caution in an ever-changing environment

Advances in mobile technology, such as touch identification mechanisms and multifactor authentication, underscore why now is the time for brands to embrace the power of machine learning. Consider this scenario: A customer accesses her smartphone with a passcode or biometric identifier, and opens up a banking app with a similar series of credentials to check her balance – just like she always does on the 15th of the month. She then logs in to her insurance provider's website, where she has a regular payment due. Within a span of seconds, she has verified her identity more times than she can count on one hand. But what if her mobile device had done that for her, recognizing the logic behind her actions and immediately prompting her to “pay the balance from account 1234” based on that single initial thumb-impression? This interaction would be as intuitive, individualized, speedy and secure as they come.

Now, take those credentials and pass them securely across all of her daily interactions, without requiring her to repeatedly verify identity. Through robust multi-factored authentication, we nearly eradicate all current risks associated with things like fraud, false identification and insufficient access. Apple ran with this concept on the iPhone with Apple Pay, and the financial implications are powerful.

However, as with any innovation, that which makes one thing simpler on one hand introduces a host of new challenges on the other – in this case, heightened concerns around privacy, data confidentiality and regulatory compliance.

The onus will be on businesses to maintain robust data-handling practices, constantly ensuring the security of customers' personally identifiable information. This responsibility applies internally, as well as to external business partners; marketing firms, technology vendors and other outside contractors must be held to the same standards.

To capitalize on the power of machine learning, businesses need to think big, but start small. Before getting even considering its implications on the customer experience, it is absolutely crucial that enterprises ensure deep connectivity and visibility among organizational functions, communication channels and data. Rather than experiment with AI across every audience and interaction channel, test machine learning with a single audience segment or interaction type, then refine and expand from there.

The stunning thing about machine learning is that it is built on the premise of perpetual trial and error. Bringing machine learning into the customer experience, much like the technology itself, isn't a one-and-done implementation; it's a dynamic exercise in ongoing improvement to continuously strengthen the relationships brands build with each and every individual consumer and interaction. And we're just beginning to see what it can do.

About West

West delivers communication solutions that help brands create connected customer experiences. We have 30 years of experience strategically improving customer interaction, enhancing productivity and increasing profitability, with clients in healthcare, education, utilities and diverse commercial industries. West Interactive Services solutions include IVR & Self-Service, Proactive Notifications & Mobility, Cloud Contact Center and Professional Services.

West was recognized for its innovative proactive notifications suite by Frost & Sullivan, with a North American 2015 Product Leadership Award in the Contact Center Outsourcing Industry.

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