



Business challenge

Great customer experience is a key competitive metric, but as businesses adopt digital channels, how can they differentiate themselves? And how can they engage customers on an emotional level?

Transformation

FaceMe uses IBM® Cloud™ and IBM Watson® technologies to create incredibly lifelike Digital Humans who can see, hear, talk with and remember customers – for real-time, always-on, personalized service.

Business benefits:

Emotional
connection with customers helps build trust and brand loyalty

89%
of end users say it is easy to use a digital assistant

>75%
satisfaction for customer inquiries managed digitally from end to end

FaceMe

Creating compelling customer experience by adding a human touch to digital interactions

FaceMe provides clients with an omni-channel digital workforce capable of delivering empathetic customer experience at scale, anywhere, anytime, on any device. Using advanced AI technology, the company creates incredibly lifelike Digital Humans who interact vocally with realistic facial expressions, understanding customer inquiries and delivering appropriate responses. By seeing, hearing, recognizing and where appropriate remembering customers, FaceMe's Digital Humans transform the customer experience, using the all-important human touch to keep engagement high on digital channels.

"We want our technology to contribute to society in a positive way, bringing the human touch to digital interactions on a huge scale, so that people can focus on what they do best."

Danny Tomsett
Founder and CEO
FaceMe

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The move to digital

Analysts estimate that, within ten years, 85 percent of interactions between businesses and their customers will happen through digital channels. While these channels offer speed and convenience at low cost, substituting a digital interaction for a personal one creates a less differentiated customer experience. And with [73 percent of customers](#) ranking quality of experience alongside price and service as a key influencer of brand loyalty, can businesses really afford to give up the opportunity to stand out from their competitors? The stakes are high: churn and revenue loss are the natural consequences of poor customer experience.

What if there were a way to bring the human element into digital interfaces to create compelling interactions? To personalize the digital customer relationship experience at scale? These questions prompted Danny Tomsett, Founder and CEO of FaceMe, to imagine how the positive impact of face-to-face communications in sales could be integrated into digital channels.

“Ultimately, people embody a brand’s values, and the emotional connection

with people creates engagement and loyalty,” Tomsett explains. “We believe customer experience is the new currency. By enabling companies to understand emotions, express empathy and converse naturally over digital channels, we aim to help them boost the value of those experiences.”

Seamless, natural interactions

Drawing on its deep expertise in fields such as computer vision, emotional understanding and real-time animation, FaceMe envisioned an exceptionally ambitious idea: to create realistic, three-dimensional Digital Humans who can understand spoken language, process visual cues about the speaker’s mood, assess the customer’s needs, and respond in a natural way with appropriate facial expressions.

“IBM Watson plays a critical role in our intelligent Digital Human platform: a ready-made, best-in-class platform for processing natural language,” says Tomsett. “Our software is designed to listen to how the customer speaks and assess their facial expressions, and Watson tells us what they are saying



by processing speech-to-text at high speed. We can understand the context of the customer’s inquiry, determine the best response, then use real-time animation and text-to-speech to deliver a natural, emotionally rich response to the customer.”

Already deployed in a number of customer-facing roles worldwide, including interactive kiosks in bank branches, FaceMe’s Digital Humans process and respond to questions in as little as 100 milliseconds, making the interaction seamless and natural. By running biometrics on video data from cameras in the kiosks or in users’ smartphones, the solution can learn

to recognize customers by sight and greet them by name, if this functionality is included, making customers feel more valued. FaceMe also incorporated sophisticated situational awareness into the solution, so that it can differentiate between speakers and filter out unwanted background noise.

“Many things that are easy for people—such as understanding when the person we’re speaking to has turned aside to speak to someone else—are very hard for computers,” says Tomsett. “We’re really proud of what we’ve already accomplished, and we’re continuing to refine the solution using machine-learning techniques.”

Cloud-powered solution

Bringing its Digital Humans to websites and mobile devices requires intensive real-time 3D rendering, so FaceMe makes significant use of Graphics Processing Units (GPUs). This is one of the reasons the company chose to run on IBM Cloud bare metal servers, which enable it to specify NVIDIA Tesla GPUs. “Apart from kiosk-based installations, where we handle the processing locally, we are heavy users of GPUs in the cloud,” says Tomsett. “IBM gave us the flexibility to choose the right GPU for our needs and to pay hourly or monthly as our requirements change. We’re now looking at how we can scale our GPU compute needs elastically on the IBM Cloud.”

Another major advantage of the IBM Cloud is that it minimizes end-to-end latency for FaceMe, which is a key element in achieving natural-feeling interactions. The company can deliver local-based streaming wherever its customers are based, and take advantage of IBM’s dedicated high-bandwidth backhaul to communicate with its master systems. Tomsett comments: “In plain English, IBM Cloud means customers get a fast, responsive service from our Digital Humans.”

As the Digital Humans build experience from real-life customer interactions, FaceMe continually retrains its language-processing and emotion-understanding models to optimize responses. The company also

uses neurolinguistic methodologies to enable the Digital Human to mirror the real person’s behavior in subtle ways that make the experience more natural.

Because the AI revolution is still very new, there are limits to what is possible. If an inquiry is too complex for a FaceMe Digital Human to answer, the solution can connect via video to a call center, seamlessly replacing the on-screen avatar with a real person. Indeed, this partnership of the virtual and the real will likely become the model for many types of interaction. Tomsett gives the example of a loan applicant in a bank branch: the FaceMe Digital Human could run through a series of standard questions and pass the applicant’s responses to a credit-decision tool. “If the applicant qualifies for the loan, the system could then hand them to an agent on a video link to complete the process. Both sides would have the pre-filled form on the screen in front of them, the agent could talk them through the small print, and then the applicant could sign on the screen—that functionality is already in our solution.”

Adding value in digital service

A key value-add of the FaceMe Digital Human is its ability to handle routine work in order to enable real employees to concentrate on more interesting and

challenging tasks—including managing any questions that the Digital Human cannot answer. Crucially, customers who choose the digital route still get the benefit of an emotional connection.

Outside traditional sales and customer service, FaceMe anticipates considerable opportunity to employ Digital Humans in scenarios where people may not be comfortable interacting with a real human being. For example, being in the hospital is often highly stressful for children, who may prefer to explain their feelings and symptoms to an interactive character. For them, FaceMe can easily apply its technology to animated characters or animals. Likewise, many people who struggle with mental health issues may find it difficult to confide in a real person for fear of being judged. “One in five people are affected by mental health in quite serious ways, and a big first step is just getting those people to communicate,” says Tomsett. “One of the key metrics coming through is that 63 percent of people would prefer to talk to a Digital Human about mental health challenges, so there’s now this amazing opportunity to contribute to society by getting people talking.”

The Digital Humans created by FaceMe fill the gap between traditional face-to-face customer service and chatbot-powered digital channels, providing an emotionally rich customer experience that can be delivered at scale, 24 hours a day, on any



device. Using the ability to understand spoken natural language and emotions, and to provide accurate responses with the appropriate tone of voice and facial expressions, the Digital Humans can easily act as the first touchpoint for customers.

As a company that helps businesses deliver exceptional customer experience, FaceMe is understandably proud of its own metrics. Surveys across end users show that 100 percent say they trust the information they are given by a digital assistant. Customers report satisfaction of 7.6 out of 10 for their interactions, and this figure is continuing to climb. On the emotional front, over 90 percent of people smile during their first interaction with a FaceMe Digital Human. As Tomsett says, “Already they’ve got dopamine flowing through the body and they’re feeling really good about the experience. That’s a key driver for loyalty and positive NPS.”

One of the key benefits of the FaceMe solution is in maximizing the opportunity presented by customer interactions while keeping employees focused on the highest-value—and most interesting—tasks. FaceMe’s Digital Humans are capable of handling thousands of customer conversations simultaneously, totaling millions of interactions per month. As its business grows, the company can seamlessly scale up its services on the IBM Cloud.

Tomsett concludes: “We believe that the combination of IBM and FaceMe technologies will bring a new level of customer experience, worldwide. IBM Cloud gives us global presence and scale, and there are no limitations on our ambitions for the business. We want our technology to contribute to society in a positive way, bringing the human touch to digital interactions on a huge scale, so that people can focus on what they do best.”

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Solution components

- IBM® Cloud
- IBM Watson®
- IBM Cloud bare metal servers
- IBM Cloud bare metal servers with NVIDIA Tesla GPUs

Take the next step

To learn more about IBM Cloud, please contact your IBM representative or Business Partner, or visit: ibm.com/cloud

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