

## DAVID ISBITSKI '98, CHIEF EVANGELIST FOR AMAZON ALEXA, ON THE POWER OF VOICE

**F**our years ago, David Isbitski '98 was the first person hired by Amazon for its newly created Alexa skills kit group. Today – tens of thousands of skills later – he is the voice-activated technology's chief evangelist. In July, he gave a keynote address at the July VOICE 2019 Conference. Held on NJIT's campus for the second year in a row, the conference is the world's largest annual gathering of voice technologists, developers and executives. Below, Isbitski describes his early embrace of technology and his belief in its power to restore human interactions increasingly lost in a mobile, fast-paced world.

**Q:** HOW DID NJIT PIQUE YOUR INTEREST IN TECHNOLOGY AND ENABLE YOUR CAREER?

**A:** I was always excited about technology from a very early age, but when I was a freshman at NJIT, the Internet was just starting to form. Most jobs in technology were either related to computer engineering or computer science. By my junior year, a new area of study started to arrive called "Information Systems." By switching into the Information Systems major, I was able to get a background in business and combine it with technology to solve problems beyond just computer chips and theoretical algorithms. Today, we see technology used across all sorts of industries and job roles, but at the time of my matriculation, that future wasn't always clear. I was thankful I had the opportunity to combine business with technology at such an early stage in the tech world and its help serves me well to this day.

**Q:** HOW DID YOU BECOME A TECHNOLOGY EVANGELIST?

**A:** Since grade school, when I used my first computer, the Commodore VIC-20,



*David Isbitski '98, chief evangelist for Amazon Alexa and keynote speaker at the 2018 VOICE conference, returned to campus in July to reprise his role at the world's largest gathering of voice developers and executives.*

I've been very interested in whatever new technology came my way. So I was always very excited about new things and needed to tell people what they had to have! But I was a business consultant for many years before I applied in 2007 for a job as a developer evangelist for Microsoft. I was then able to use my "developer personality" to educate people on how to think about and use web- and mobile-based technology. In 2015, I was the first employee of the Alexa skills kit group. I remember sitting around a table talking about our first 10 skills. We recently reached 100,000.

**Q:** HOW IS VOICE TECHNOLOGY A DISRUPTOR, BOTH PRACTICALLY AND SOCIETALLY?

**A:** I don't think it is. I see time as the disruptor. As it goes by, things change, while I see voice technology as timeless. I think it actually returns things to us we've lost. For example, I use Alexa's Drop In feature to talk to my mother. She doesn't have to get up to answer the phone – my face just appears on the speaker, creating an ad hoc family connection that's missed when people are far away. We put Alexa in retirement homes and a 93-year-old man once told me that just hearing another person's voice – in his case, that of his son and daughter-in-law – got him through the day. And for me personally, once a day I say, 'Alexa, thinking time,' and she dims the lights by 20 percent, turns them sky blue and turns on classical music. This helps me with creative work, and especially my writing.

**Q:** WHAT ARE SOME OF ALEXA'S GROWING PAINS?

**A:** What's really changed in text-to-

speech technology is an understanding not just of intention, but of context. It's called NLU – natural language understanding. And here's one of the challenges for that technology: learning that human conversation takes place within a specific culture – it's not just about programming written code, but building models based upon real conversations. In Japan, for example, you don't interrupt people. We've held forums to see what Alexa gets wrong and crowdsourced answers. Alexa's understanding is phonetic, but she also learns voices and individuals' language choices over time. When I ask for Top 10 hits, it's very different from when my teenage daughter asks. Alexa gets smarter every day, and learning context is part of that.

**Q:** HOW IS VOICE TECHNOLOGY CHANGING THE WAY WE THINK ABOUT MACHINES?

**A:** Rather than teach people to talk to machines, we've taught machines to understand people. The most exciting thing for me is that people have conversations with their technology. That Alexa can now understand intention is huge. That's the sea change. But I think it's also changing our connection to ourselves and other people, as well as the way we use conversation. I imagine the future as very much like the holodeck in "Star Trek," where the crew was able to bring back digital personalities like Einstein. I want my children to not just be able to say, 'I know Dad felt very strongly about this issue,' but to see me before an audience defending my beliefs. ■

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