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Computers that understand speech: Where are we now?

Popular science fiction of the past century brought to us visions that have been abundantly surpassed by today's technology, except for machines that understand speech. The speech recognition technology used today was invented in the 1970s, and refined through the following 40 years to bring us popular application like Google Voice Search and Siri. However, we are still far from human-like capabilities. Where are the missing links? What are we doing wrong? In this talk I will discuss why speech recognition is so difficult, on which problems researchers around the world are working now, and what we can expect in the next few years.

Roberto Pieraccini is currently the director of the International Computer Science Institute in Berkeley, CA. Prior to that he was the CTO of SpeechCycle, a research manager at IBM T.J. Watson Research and SpeechWorks International, and a member of technical staff at Bell Labs and AT&T Shannon Laboratories. He started his career in the 1980s as a researcher at CSELT, the research laboratories of the Italian telephone company. His research interests range from speech recognition to spoken language understanding and dialog, multimodal interaction, and machine learning. He is a fellow of IEEE and ISCA, a member of the AVIOS board, and a member of the editorial board of several scientific and technology magazines. He is the author of "The Voice in the Machine", a general-audience book published by MIT Press on the history of "computers that understand speech."