Toward Machines with Emotional Intelligence

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Abstract

The skills of "emotional intelligence" have been argued to be among the most important for people, even more important than mathematical and verbal intelligences. Emotional intelligence includes the ability to recognize emotion -- to see if you're irritated or annoyed someone, pleased or displeased them, bored or interested them. It includes the ability to know when to show emotion (or not), and how you should respond to another's emotions, as well as many other skills.

In this talk, I'll describe how we're giving computers new skills of intelligence, specifically the ability to recognize and respond appropriately to human emotion. I'll show examples of systems that try to assess interest, frustration, stress, and a range of other states that occur when interacting with computers. These systems involve new kinds of sensing for desktop, wearable, and other environmental interfaces, as well as the development of new pattern recognition and machine learning algorithms for drawing inferences about the multimodal data.

Current applications include human learning, usability feedback, health behavior change, and human-robot interaction.