Affective Computing is the field of research directed at creating technology that recognizes, interprets, simulates and stimulates human emotion. In this talk, I will broadly overview my fifteen years of effort in advancing this nascent field, and emphasize the rich interdisciplinary connections between computational and scientific approaches to emotion. I will touch on several broad questions: Can a machine understand human emotion? To what end? Can a machine “have” emotion, and how would this impact the humans that interact with them? I will address these questions in the context of several domains, including healthcare, economic decision-making and interpersonal-skills training. I will discuss the consequences of these findings for theories of intelligence (i.e., what function does emotion serve in human intelligence and could this benefit machines?) as well as their practical implications for human-computer, computer-mediated and human-robot interaction. Throughout, I will argue the need for an interdisciplinary partnership between the social and computational sciences around to topic of emotion.