

It's Not You, It's Me: Automatically Extracting Social Meaning from Speed Dates

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Automatically detecting human social intentions from spoken conversation is an important task for social computing and for dialogue systems. We describe a system for detecting elements of interactional style: whether a speaker is awkward, friendly, or flirtatious. Participants rated themselves and each other for these elements of style. Using rich dialogue, lexical, and prosodic features, we are able to detect flirtatious, awkward, and friendly styles in noisy natural conversational data with above 70% accuracy, significantly outperforming not only the baseline but also, for flirtation, outperforming the human interlocutors. We find that features like rate of speech, pitch range, energy, and the use of questions help detect flirtation, collaborative conversational style (laughter, questions, collaborative completions) help in detecting friendliness, and disfluencies help in detecting awkwardness. In analyzing why our system outperforms humans, we show that humans are very poor perceivers of flirtatiousness in this task, and instead often project their own intended behavior onto their interlocutors. This talk describes joint work with Dan McFarland (School of Education) and Rajesh Ranganath (Computer Science Department).