Measuring and Improving User Satisfaction with Voice-based Conversational Systems

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As spoken conversational assistants operate in increasingly complex domains, predicting user satisfaction in conversational systems has become critical. In particular, online satisfaction prediction (i.e., predicting satisfaction of the user with the system after each turn) could be used as a new proxy for implicit user feedback, and offers promising opportunities to create more responsive and effective conversational agents, which adapt to the user's engagement with the agent. Measuring immediate changes in user satisfaction also enables for natural user studies without explicit disruptions to user experience. I will discuss our progress on conversational satisfaction modeling, and applications to automatically evaluating the effects new agent features, e.g., conversation topic suggestion, design choices, e.g., new recommendation phrasing, and subtle VUI features, e.g., prosody modulation for agent responses.

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