Sequence-based Multimodal Behavior Modeling for Social Agents

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Sequence-based Multimodal Behavior Modeling for Social Agents

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Abstract
The goal of this work is to model a virtual character able to converse with different interpersonal attitudes. To build our model, we rely on the analysis of multimodal corpora of non-verbal behaviors. The interpretation of these behaviors depends on how they are sequenced (order) and distributed over time. To encompass the dynamics of non-verbal signals across both modalities and time, we make use of temporal sequence mining. Specifically, we propose a new algorithm for temporal sequence extraction. We apply our algorithm to extract temporal patterns of non-verbal behaviors expressing interpersonal attitudes from a corpus of job interviews. We demonstrate the efficiency of our algorithm in terms of significant accuracy improvement over the state-of-the-art algorithms.

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