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A Model for User Profiling Systems with Interacting Agents

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Abstract: Service systems according to users' personal demands and preferences are on their way to provide required services in many application domains. Emulation of interactive model of human societies produces valuable outcomes for such systems. In this work, a system model with interactive agents for multi user service systems is proposed. A novel social interactive agent model using different interaction forms is also included in this proposal. In this model, agents decide how to serve to their users by considering their users' profiles and information from other agents. User clusters are formed by clustering techniques. The Q-learning algorithm is used for learning some general parameters for the society of the users. The model is evaluated in the personal story teller agent domain as a case study. Facial expressions are generated based on users' demands by these agents in this case study.

Key Words: Socially intelligent agents, user profiling, clustering, learning, multimedia applications, facial expressions.

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