

Anytime AHP Method for Preferences Elicitation in Stereotype-Based Recommender System

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Abstract

In stereotype-based recommendation systems, user profiles are represented as an affinity vector of stereotypes. Upon the registration of new users, the system needs to assign the new users to existing stereotypes. The AHP (Analytic Hierarchy Process) methodology can be used for initial elicitation of user preferences. However, using the AHP procedure as-is will require the user to respond to a very long set of pairwise comparison questions. We suggest a novel method for converting AHP into an anytime approach. At each stage, the user may choose not to continue. However, the system is still able to provide some classification into a stereotype. The more answers the user provides, the more specific the classification becomes.

Keywords: recommendation systems, preferences elicitation, decision tree, Analytic Hierarchy Process