Proposal Defense

Doctor of Philosophy in Computer Science

Context-Aware Multi-Stakeholder Recommender Systems
by Tahereh Arabghalizi

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Abstract:

Traditional recommender systems help users find the most relevant products or services fitted to their needs and preferences. However, they overlook the relevance and preferences of other sides of the market (aka stakeholders), e.g., “product suppliers” or “service providers.” Moreover, conventional recommender systems ignore the fact that users interact with the system in a specific “context” and that preferences for items in one context may differ from those in another. Beyond-accuracy objectives such as diversity of recommended items are other aspects that are not usually considered in classic recommender systems which only focus on the accuracy or relevance of items to users.

This thesis aims to propose and develop new approaches that address the above issues in a single recommender platform. For each problem, the current state of the art is examined, their shortcomings are explored, and new approaches are proposed. The goal of this thesis is to propose appropriate solutions for “context-aware multi-stakeholder recommender systems” in an online environment with different settings, provide a reasonable level of satisfaction for all involved stakeholders, and make an acceptable trade-off between the accuracy of the recommended items and the beyond-accuracy aspects.