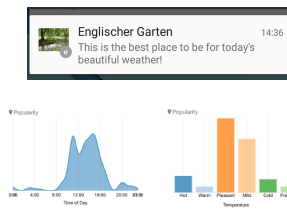


Interactive Recommender Systems in Mobile Scenarios

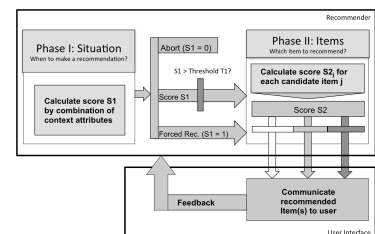
Dr. Wolfgang Wörndl (woerndl@in.tum.de, www.in.tum.de/~woerndl)

We investigate selected research problems with regard to interactive recommender systems. Delivering personalized and timely information is particularly valuable in mobile scenarios such as traveling users with smartphones. Therefore it is desirable to assist the user by services that are tailored towards her context. One main goal is to improve the user experience when interacting with these systems.

Proactive and Context-aware Recommender Systems

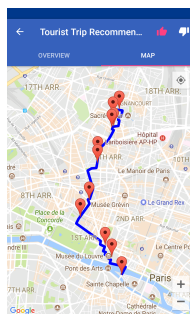


- Proactivity: system pushes recommendations to user when current situation seems appropriate
- Model for proactivity in recommender systems
- Learning the popularity of items for mobile tourist guides based on Social Media data
- Study user interface and notification issues
- Decentralized and privacy-preserving systems



Recommending Sequences of Items for Tourist Trips

- Sub-project 4.4 "Social and Collaborative Mobility Services" in TUM Living Lab Connected Mobility project (<http://tum-lcm.de/en>), with Daniel Herzog
- Solving tourist trip design problems from a user's perspective
- TourRec framework for multiple clients, including web, mobile and public displays
- Generate route with sequence of points-of-interests for city trips
 1. Discover and score places
 2. Combine places to walking route, with time constraints
- Consider context and item dependencies
- Extend solution and algorithms for groups of travelers
- Try our Android app, available in Google Play store: <https://tourrec.cm.in.tum.de>



Travel Destination Recommendation

- Data-driven destination recommender systems, with Linus Dietz
- Combine multiple travel regions to recommend a composite trip ("knapsack" problem)
 1. Compiled regions with attributes
 2. Score regions and calculate best combination with dyn. programming
- Try it: <http://regionrec.traveller-world.com>

The screenshot shows the 'Travel region recommender' web interface. It includes input fields for 'Budget in Euro' (3000), 'Start at' (31.11.2016), and 'Max. number of days' (30). There are checkboxes for 'Preferences' (Nature & Wildlife, Cities & Architecture, Hiking, Beach, Culture, Entertainment, Shopping) and 'Allowed regions' (India Himalayas North and Plains, Himalayas, Himalayas South). A table shows the 'Recommended travel trip' with columns for 'Region', 'Estimated costs', and 'Total costs'.

User Interaction with Mobile Recommender Systems



- Guidelines for user interfaces of mobile recommenders
- Investigating the effect of various interaction methods on users' rating behavior
- Conversational and critique-based interaction with exploratory recommender systems on mobile devices
- Distributed UI, e.g. private devices vs. public displays

