

# Interactive Mobile Recommender Systems

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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

### Social and Collaborative Mobility Services

- TP 4.3 in TUM Living Lab Connected Mobility project (<http://tum-llcm.de>), with Daniel Herzog
- Solving Tourist Trip Design Problems
- Generate route with Points of Interest for city trips
  1. Discover and score places
  2. Combine places to walking route, optional budget and time constraints
- Extend solution for groups, consider context and integrate public displays
- Try it: <http://citytrip.traveller-world.com/>

### Combining Multiple Items in Travel Recommendation

- Combine 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>

### 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