Summary and outlook

Agenda

- **Summary and outlook**
  - Summary
  - Outlook
  - References

Summary

- **Recommender systems have their roots in various research areas, such as**
  - information retrieval,
  - information filtering, and
  - text classification.
- **Recommender systems apply methods from different fields, such as**
  - machine learning,
  - data mining, and
  - knowledge-based systems.
- **Addressed main topics**
  - Basic recommendation algorithms
  - Knowledge-based and hybrid approaches
  - Evaluation of recommender systems and their business value
  - Recent research topics

Outlook on the next-generation recommenders (1)

- **Improved collaborative filtering techniques**
  - Use more data sources such as tagging data, demographic information, and time data
  - Combine different techniques (predictors)
  - Automatic fine-tuning of parameters
- **More scalable and more accurate algorithms**
  - Netflix Prize competition (www.netflixprize.com) gave CF research an additional boost
- **Multicriteria recommender systems**
  - Exploiting multicriteria ratings containing contextual information as an additional source of knowledge for improving the accuracy
- **Context awareness**
  - Taking time aspects, geographical location and additional context aspects of the user into account
  - Emotional context (*"I fell in love with a boy. I want to watch a romantic movie."*)
- **Group recommendations**
  - Accompanying persons? (*"Recommendations for a couple or for friends?"*)

Outlook on the next-generation recommenders (2)

- **Better explanations that change the way the user interface works**
- **More elaborate user interaction models**
  - Natural language processing techniques,
  - dialog-based systems for interactive preference, and
  - multimodal and multimedia-enhanced rich interfaces
  - are important steps in the transition between classical recommender systems and ***virtual advisors***.
- **Recommendation techniques will merge into other research fields**
  - User modeling
  - Personalized reasoning
- **…**

*Next-generation recommenders might someday be able to simulate the **behavior of an experienced salesperson** instead of only filtering and ranking items from a given catalog.*

Credits

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Thank you for your attention!

Questions?

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http://www.recommenderbook.net

Recommender Systems –
An Introduction by

Dietmar Jannach, Markus Zanker,
Alexander Felfernig and Gerhard Friedrich

Cambridge University Press, 2011

ACM RecSys
Recommender Systems
http://recsys.acm.org

ACM SIGIR
Information Retrieval
http://www.sigir.org

ACM SIGKDD
Knowledge Discovery and Data Mining
www.sigkdd.org

IUI
Intelligent User Interfaces
http://iuiconf.org