A Social Recommender System For Wines

Peter Chamberlin Undergraduate Student Department of Computer Science Birkbeck, University of London

March 17, 2013

Abstract

This is the paper's abstract ...

Contents

1	Introduction	4
2	Literature Review	6
3	Development Method	7
4	The Sommelier System	8
5	Testing and Evaluation	9
6	Conclusion	10
7	Review	11

1 Introduction

Recommender Systems Since their origin in the mid-1990s with systems such as Tapestry [3] and GroupLens [5], recommender systems have become ubiquitous on the World Wide Web, being employed by some of the worlds largest online businesses as core parts of their offering to users.

Companies such as Amazon, Netflix, Facebook and Twitter use recommender systems to make all manner of suggestions to their users. These recommendations include such things as products, movies, news stories and other interesting users.

It is the growth of the Web, which is now ubiquitous itself, that has given companies the ability to draw on unprecedented amounts of data about their users' preferences. At the same time the Web has made it easier than ever to reach their users with tailored suggestions.

Amazon's system of product recommendations using item-to-item collaborative filtering is regarded as a "killer feature" [4], and is one of the defining features of the Amazon brand experience. Amazon state their mission to be, "to delight our customers by allowing them to serendipitously discover great products" [4].

Netflix's movie recommender system Cinematch "Netflix Prize" competition

Social Recommender Systems Guy et. al. [?] describe social recommender systems as, "a class of recommender systems that target the social media domain". The social media domain

Recommending Wines

Service Oriented Architecture

Aims and Objectives I aim to produce a recommender system for wines which takes advantage of both ratings and tasting notes to recommend both interesting wines and interesting users to users of the system.

Rather than implement a full graphical interface for the system I have chosen to develop an HTTP API.

In doing so I will explore the field of recommender systems, What is a social recommender system? Why are these systems interesting - Benefits - Challenges
Typical applications... - Movies - Products (i.e. Amazon)
Applications in wine domain - what's the same - what's different
What will this project do? - implement a recommender system for wines
- exploration of techniques etc.

2 Literature Review

There has been a proliferation of techniques developed for making recommendation.

These techniques fall into a number of categories, which include collaborative, content-based, demographic, utiliy-based and knowledge-based (Burke, 2002).

The term "recommender system" was coined by Resnick and Varian [?] to describe a system that "assists and augments" the "natural social process" of recommendation, preferring it to the more narrow term "collaborative filtering" used by Goldberg et al. [3] to describe their Tapestry system.

- off the web (?) on the web...
- What are the methods employed in recommender systems?
- Collaborative Filtering User-based filtering Item-based filtering
- Content-Based Filtering Variants
- Characteristics of the domain
- Cold start problem Sparsity problem ... etc.

3 Development Method

How the omlette was made.

4 The Sommelier System

Design of the system / project outcome

5 Testing and Evaluation

How well does the system work? Details of testing and evaluation of the system. . .

6 Conclusion

Was the project successful?

7 Review

Review / reflections of the project on a personal level. What has been achieved? What were the problems, and how were they overcome?

References

- [1] Burke, *Hybrid Recommender Systems: Survey and Experiments*, User Modeling and User-Adapted Interaction, Volume 12 Issue 4, November 2002, Pages 331 370. Kluwer Academic Publishers: Hingham, MA, USA
- [2] Debnath, Souvik and Ganguly, Niloy and Mitra, Pabitra, Feature weighting in content based recommendation system using social network analysis, Proceedings of the 17th international conference on World Wide Web, WWW '08, 2008, Beijing, China, Pages 1041 1042. ACM: New York, NY, USA,
- [3] Goldberg, D. Nichols, D., Oki, B. M., and Terry, D., *Using collaborative filtering to weave an information tapestry*, Commun. ACM 35, 12 (Dec. 1992), 61–70.
- [4] Mangalindan, J. P., Amazon's Recommendation Secret, July 2012. URL: http://tech.fortune.cnn.com/2012/07/30/amazon-5/
- [5] Resnick, P., Iacovou, N., Sushak, M., Bergstrom, P., Riedl, J., GroupLens: An open architecture for collaborative filtering of netnews, 1994 ACM Conference on Computer Supported Collaborative Work, 1994. Association of Computing Machinery, Chapel Hill, NC.