

Report on the Workshop on Social Aspects in Personalization And Search (SoAPS)

Ludovico Boratto
Eurecat
ludovico.boratto@acm.org

Giovanni Stilo
Sapienza Università di Roma
stilo@di.uniroma1.it

Abstract

The 2nd Workshop on Social Aspects in Personalization And Search was held on March 26, 2018 in conjunction with the 40th European Conference on Information Retrieval (ECIR 2018). The scientific program included paper presentations and a final discussion. The keynotes were delivered by Dr. Sihem Amer-Yahia and Dr. Denis Parra.

1 Introduction

On March 26, 2018, the 2nd Workshop on Social Aspects in Personalization And Search¹ was held in Grenoble, in conjunction with the 40th European Conference on Information Retrieval (ECIR 2018). The workshop was organized by the Data Science and Big Data Analytics unit at Eurecat (Spain) and by the Department of Computer Science at the Sapienza University of Rome (Italy). The aim of the workshop was to collect novel ideas in the exploitation of social aspects for personalization and search technologies, to provide a common ground for researchers working in this area.

The workshop had more than 30 participants. The keynote speakers were Dr. Sihem Amer-Yahia from CNRS (France) and Dr. Denis Parra from PUC (Chile). The scientific program included paper presentations and a final discussion. The papers covered topics that go from the recommendation of venues, friends, and news, over user modeling approaches for personalization, to tools that allow to explore and analyze behavioral and preference data.

The event concluded with a discussion session to briefly summarize the outcomes of the workshop.

2 Summary of the keynote talks

“Social aspects in Interactive Recommender Systems: Bridging the gap between predictive algorithms and interactive user interfaces”, by Denis Parra. Recent research efforts are increasingly oriented towards the user experience of

¹This work was supported in part by the MIUR under grant “Dipartimenti di eccellenza 2018-2022” of the Department of Computer Science of Sapienza University.

recommender systems. Indeed, human factors, such as user satisfaction, trust, transparency, and sense of control, affect the acceptance of recommendations. In his talk, Dr. Parra described several works on interactive visualizations for recommender systems and introduced a framework that combines recommendation with visualization techniques to support human-recommender interaction.

“Human-In-the-Loop Personalization”, by Sihem Amer-Yahia. The talk began with the assumption that while personalization is useful, current algorithms confine users into profiles that reflect their most predominant characteristics, while ignoring their others, such as their hidden or evolving interests. Dr. Amer-Yahia showed that this can be addressed by allowing users to intervene and examined two cases of intervention: Customization and Adaptive Personalization. The last part of the talk speculated on how far human-in-the-loop personalization can be pushed to please different humans.

3 Summary of the papers

“Venue Suggestion Using Social-Centric Scores”, by Mohammad Alian Nejadi and Fabio Crestani. The authors presented a set of relevance scores to produce personalized suggestions of points of interest. These scores, extracted from location-based social networks, model each user by focusing on the different types of information extracted from venues that they have previously visited. Experiments conducted on the dataset of the TREC Contextual Suggestion Track, show that social scores are more effective than scores based venues’ content.

“What kind of content are you prone to tweet? Multi-topic Preference Model for Tweeters”, by Lorena Recalde and Ricardo Baeza-Yates. The problem addressed in this paper is the identification of users’ implicit topic preferences by analyzing the content categories they tend to post in Twitter. The authors propose a method based on the Mixed Gaussian Model to extract the multidimensional preference representation for 399 Ecuadorian tweeters, concerning twenty-two different topics. Results indicate that the proposed approach is effective at detecting the topic interests of users.

“Recommending Friends by Identifying Latent Similarities in Social Environments”, by Roberto Saia, Luca Piras, and Salvatore Carta. This position paper introduced a novel technique able to discover the shared latent-spaces between users, by moving the data analysis in the frequency domain, where the spectral patterns of the users are compared. By identifying non-explicit similarities between the users, friend recommendations are performed.

“Data Pipelines for Personalized Exploration of Rated Datasets”, by Sihem Amer-Yahia, Anh Tho Le, and Eric Simon. In this work, the authors presented a tool to express end-to-end data pipelines for the personalized exploration of rated datasets. Their framework is based on mining labeled segments of interest to the data consumer, and allows to find segments whose demographics and rating behaviour are both relevant to the data consumer.

“Using word embeddings in Twitter election classification”, by Xiao Yang, Craig Macdonald, and Iadh Ounis. In this paper, the authors used a Twitter election classification task that aims to detect election-related tweets, to investigate the impact of the background dataset used to train the embedding models, the context window size, and the dimensionality of word embeddings on the classification performance. Results show that large context window and dimension sizes are preferable to improve the classification performance and that word embeddings and CNN leads to statistically significant improvements over various baselines such as random, SVM with TF-IDF, and SVM with word embeddings.

“Improving News Personalization through Search Logs”, by Xiao Bai, B. Barla Cambazoglu, Francesco Gullo, Amin Mantrach, and Fabrizio Silvestri. This paper studied the problem of news personalization by leveraging usage information that is external to the news service. The proposed approach relies on the concept of “search profiles”, which are user profiles that are built based on the past interactions of the user with a web search engine. Experiments on real-world datasets, obtained from Yahoo, show that the approach is able to boost the clicks on news articles shown at the top positions of a ranked result list.

“ITACaT: A Tool for Interactive Analysis of Car Theft Data”, by María F. Sepúlveda and Denis Parra. This work proposed an interactive tool that allows analysts from car insurance companies to discover car theft patterns from unstructured text coming from different sources of information. The authors show that combining transcribed descriptions of car thefts from insurance companies with data collected from online social networks can help analysts on discovering patterns of criminal activity.

“The Impact of Foursquare Checkins on Users’ Emotions on Twitter”, by Seyed Amin Mirlohi Falavarjani, Hawre Hosseini and Ebrahim Bagheri. The authors analyzed whether users’ offline behavior captured through their check-ins at different venues on Foursquare can impact users’ online emotion expression as depicted in their tweets. Results show that users’ offline activity can impact their online emotions; however, the type of activity determines the extent to which a user’s emotions will be impacted.

“Analyzing the Interaction of Users with News Articles to Create Personalization Services”, by Alessandro Celi, Alejandro Piad, Jsva Daz Blanco, and Romina Eramo. The authors presented a large-scale analysis of how the users interact with the news, focusing on different user segments. Considering the Yahoo News Feed dataset, the aim was to understand users behaviors and their relations with sociological aspects. Thanks to this type of analysis, different forms of personalization can be generated.

4 Conclusions

Overall, the 2nd Workshop on Social Aspects in Personalization And Search was a success, both in terms of number of participants and of interests that emerged during the presentations and the final discussion, creating new relationships and novel ideas in this area. Tentative plans to organize the 3rd workshop next year were formed, along with plans to have a special issue in a journal on these topics, which will soon be organized.