

Second Workshop on Health Recommender Systems (HealthRecSys 2017)

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ABSTRACT

The 2017 Workshop on Health Recommender Systems was held in conjunction with the 2017 ACM Conference on Recommender Systems in Como, Italy. Following the first workshop in 2016, the focus of this workshop was on enhancing the results of the first workshop by elaborating discussions on the topics, attracting scientist from other domains, finding cross-domain collaboration, and establishing shared infrastructures.

KEYWORDS

Health Recommender System; Health-aware computing; Health-aware information systems; Recommender Systems; Well-being;

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1 INTRODUCTION

Health is at the center of our everyday lives. During the 1st Health Recommender Systems workshop[1] we elaborated a great variety of fields in which recommender systems can improve our awareness, understanding and behavior regarding our own health. At the same time these application areas bring new challenges into the recommender community. Recommendations that influence the health status of a patient, need to be either liable or accompanied by domain experts. To make the recommender liable, complex domain

specific user models need to be created, which on the other hand creates privacy issues. While trust in a recommendation needs to be explicitly earned via transparency, explanations and empowerment, other systems might want to persuade users into beneficial actions that would not be willingly chosen otherwise. The variety of those challenges also results from the number and diversity of stakeholders involved in health systems. Taking the patient perspective, simple interaction and safety against harmful recommendations might be the prior concern. For clinicians and experts, on the other hand, what matters is precise and accurate content. Finally, health care providers, insurance companies, and clinics are interested in success rates, study results, and financial benefits of the new systems. In this workshop, we wish to extend and deepen the discussions initiated last year with the aim of establishing a roadmap of possible research topics in Health Recommender Systems.

Our aim is to enhance the results of the first workshop in the following areas:

- Elaborate discussion topics of the first workshop
- Strengthen the community of researchers working on Health in RecSys
- Attract scientists from other domains to RecSys (e.g. health, psychology, ...)
- Find cross-domain collaboration projects and funding targets
- Establish shared infrastructure (datasets and tools)

2 WORKSHOP FORMAT

The workshop was conducted as a full-day interactive workshop in conjunction with the 2017 ACM Conference on Recommender Systems in Como, Italy. The morning session started with a keynote by Xavier Amatriain from "Dr.Assist". The rest of the morning session consisted of lightning presentation for selected research submissions and poster presentations for the other submission. Between each presentation plentiful time for discussion and feedback

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on the ideas presented was given. Prominent topics were discussed via social media and a shared document that all participants could edit. The afternoon session was highly interactive, since we received great feedback on that approach last year. The sessions included, idea generation sessions, focused group discussions and open fish-bowl discussions.

3 ACCEPTED CONTRIBUTIONS

The workshop accepted short research papers (4 pages) and short position papers (2 pages), both in the ACM conference paper style. Papers were either selected for lightning presentations, or otherwise discussed in the form of poster presentations. Overall approximately 10 contributions were accepted and presented during the HealthRecSys workshop 2017. The topics of discussed in the workshop include but are not limited to:

- Algorithms for HRS
- Domain Knowledge Representation
- Regulations and Standards
- Behavioral Change
- Medical evaluation techniques
- User Profiling
- Pervasive Systems
- Personalization
- Persuasion
- Social Motivation
- Gamification
- Empowerment
- Trust
- Explanations
- Nudging
- Patient Needs/Satisfaction
- User Interaction Design
- Expert-in-the-Loop
- Privacy
- Ethics

4 PROGRAM COMMITTEE

We thank the program committee for supporting this workshop:

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- Shlomo Berkovsky
- Aysegl Dogangün
- Michael Ekstrand
- Mehdi Elahi
- Alexander Felfernig
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REFERENCES

- [1] David Elswiler, Bernd Ludwig, Alan Said, Hanna Schaefer, and Christoph Trattner. 2016. Engendering Health with Recommender Systems. In *Proceedings of the 10th ACM Conference on Recommender Systems (RecSys '16)*. ACM, New York, NY, USA, 409–410. DOI: <http://dx.doi.org/10.1145/2959100.2959203>