AI*HCI 2013: International Workshop on Intelligent User Interfaces

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Abstract. The AI*HCI workshop attempts to provide some answers on how AI can be used in the context of HCI research community. Adaptation, personalization and user modeling have been the recurrent themes among the accepted papers. These themes have been investigated and applied to several domains such as tourism, museum visits, information presentation and virtual environment adaptation.This first edition of the workshop has eight accepted papers, one demo paper and an invited talk.

Keywords: intelligent interfaces, user modeling, intelligent information visualization, BCI.

1 Introduction

The 1st Workshop on Intelligent User Interfaces (AI*HCI 2013[1]) is taking place on 4th of December 2013 in Turin in conjunction with the XIII Conference of the Italian Association for Artificial Intelligence (AI*IA 2013[2]).

Intelligent User Interfaces aims at improving the symbiosis between humans and computers by merging two research fields: Artificial Intelligence (AI) and Human-Computer Interaction (HCI). The workshop attempts to provide insight into this issues by providing answers to how to include intelligent capabilities in the interface for improving performance, usability and experience in critical ways. In particular, reasoning on different user's features, visualisng information to be presented in a way that is most suited to the user and context features, improving the whole user experience with personalized services are important issues which merits attention from researchers and practitioners in the field of human computer interaction. Some questions motivate this workshop:

- Does the inclusion of intelligent capabilities improve the interactive experience of the user?
- Which traits should be included in the user model?
- Which is the importance of reasoning on the context in adaptation traits?
- How the personalized services should be adapted to the user in order to increase her satisfaction?

[1] http://aihci.di.unito.it/
[2] http://aixia2013.i-learn.unito.it/

2 Contributions

Adaptation, personalization and user modeling are recurrent themes among the accepted papers. These themes have been investigated and applied to several domains such as tourism [2,5], museum visits [4], information scheduling and presentation [1,6,7,8], behavioral modeling [3] and virtual environment adaptation [9].

Ardissono et al. [1] propose a model based on Temporal Constraint Satisfaction Problems techniques which generate safe schedules across multiple calendars. It is applied in MARA (Mixed-initiAtive calendaR mAnager), which supports the management of online shared calendars including multi-user activities. A preliminary test with users provided encouraging results on the efficacy and usefulness of MARA's features.

The paper of Vincze and Poggi presents some works on the area of vagueness [3]. In particular, after the analysis of the multimodal arrangement of the expressive or communicative signals of vagueness of the whole body (gaze, facial expression, head movements, posture), they present a qualitative study on how a Speaker multimodally communicates that he himself or the Interlocutor is being vague.

D'Amico et al. [2] present a framework for smart tourism that allows to define individual user visits and offers to each user the capability of making changes or updates to the predefined plan during the visit using different devices. The recommender layer of the framework uses this information to provide useful location-based services according to the user profile and itinerary.

Braunhofer et al. [5] present a context-aware recommeder systems (STS) that takes into account various contextual factors, including the weather conditions at the recommended places of interest. The paper presents a user study that shows that including weather as a contextual factor increases the choice satisfaction and the perceived recommendation quality.

Automatic generation of a post-visit summary video of the museum visit is the issue addressed in the paper of Lamir et al. [4]. The video summary is personalized to show the visitors the exhibits they saw, specific interest they took in given exhibits, and important exhibitions that they have missed and might be interested in future visits.

Cena et al. [6] describes the design of a movie timeline for the ReAL CODE (Recommendation Agent for Local Contents in an Open Data Environment) project. The proposed approach differs from traditional movie recommender system since it also provides tools and facilities to manage movies according to user relevant information such as people, places, and time connected to the movie.

In his demo paper [7] Orio proposes ClipBoard, a novel system aimed at improving the accessibility of movies with the goal of augmenting the enjoyment of the user with the synchronous delivery of accessibile content. In particulat, since the availability of accessible content for TV programs and movies still depends on the choice of the film distributor, ClipBoard allows to synchronize in real-time, using a portable devices, the soundtrack which is audible to the audience with an annotated reference signal stored in the device.

Yamate and Sunayama propose a system that can support document writing in a top-down structure [8]. In particular, the system supports the user in creating comprehensible documents by supplying evaluation values reflecting the quality of a top-

down structure.

In order to develop an Adaptive Virtual Environment Carofiglio and Abbattista present a methodology that overcomes the weaknesses of traditional user-centered evaluation methods by employing a Brain Computer Interface [9]. The proposed methodology aims at supporting the design of an engaging experience for users and enhancing the user experience by dynamically adapting the interaction to the user emotional state so that a more immersive interaction could result.

3 Acknowledgement

The AI*HCI 2013 workshop chairs would like to thank all the authors for their submissions. Furthermore, we would like to thank the AIxIA chairs, Matteo Baldoni, Cristina Baroglio and Guido Boella (University of Torino, Italy), for their guidance during the workshop organization.

Our gratitude goes also to our invited speaker, Tsvi Kuflik (from the University of Haifa, Israel), for sharing his insights on the recent developments in the field and to the Department of Computer Science, University of Turin, for having funded his participation to the Workshop.

Last but not least, we want to thank the members of the programme committee who reviewed the submissions and helped to keep a high quality of the accepted papers.

3.1 Programme Committee

- Liliana Ardissono, Dipartimento di Informatica, Università di Torino
- Federica Cena, Dipartimento di Informatica, Università di Torino
- Luca Chittaro, Dipartimento di Matematica e Informatica, Università di Udine
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- Ilaria Torre, Università di Genova
- Massimo Zancanaro, FBK Trento, Italy

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3. Laura Vincze and Isabella Poggi. *Multimodal Markers of One's Own and the Other's Vagueness and Unspecificity*. In Proceedings of the 1st Workshop on AI*HCI: Intelligent User Interfaces (AI*HCI 2013)
4. Joel Lanir, Tsvi Kuflik, Idan Zolantz and Urit Lanzet. *Personalized Video Summary of a Museum Visit*. In Proceedings of the 1st Workshop on AI*HCI: Intelligent User Interfaces (AI*HCI 2013)
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7. Nicola Orio. *ClipBoard: Augmenting Movie Entertainment*. In Proceedings of the 1st Workshop on AI*HCI: Intelligent User Interfaces (AI*HCI 2013)
8. Satomi Yamate and Wataru Sunayama. *Document-polishing Support System for Creating Top-Down Structure*. In Proceedings of the 1st Workshop on AI*HCI: Intelligent User Interfaces (AI*HCI 2013)
9. Valeria Carofiglio and Fabio Abbattista. *A rough BCI-based Assessment of User's Emotions for Interface Adaptation: Application to a 3D-Virtual- Environment Exploration Task*. In Proceedings of the 1st Workshop on AI*HCI: Intelligent User Interfaces (AI*HCI 2013).