UCAI 2020: Workshop on User-Centered Artificial Intelligence

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ABSTRACT

The proliferation of AI-based techniques poses a range of new challenges for the design and engineering of interactive and adaptive systems since they tend to act as black boxes and do not offer the user sufficient transparency, control, and interaction opportunities, which are considered major goals of user-centered design in the HCI field. This workshop aims at sharing and discussing recent developments at the intersection of HCI and AI, and at exploring novel methodological, technical, and interaction approaches. Researchers with diverse disciplinary backgrounds will contribute to advancing the research agenda in this emerging field of research.

CCS CONCEPTS

• **Human-centered computing** → **Human computer interaction (HCI)**; • **Computing methodologies** → **Artificial intelligence**.

1 THEMATIC SCOPE

The UCAI 2020 workshop will address topics at the intersection of human-computer interaction (HCI) and artificial intelligence (AI) with the aim of strengthening user-centered aspects in the design of AI-based systems. A major theme lies in empowering users by making intelligent and adaptive systems more transparent, interpretable and scrutable. Designing the interaction with intelligent systems from a user- and activity-centric perspective is a further essential question for engaging users beyond checking final system outputs, and thus making AI-based systems more interactive, effective, comprehensible and accountable in one of their numerous application contexts. Counteracting potential biases in data and algorithms is a further important goal to increase trustworthiness and fairness. There are also still methodological gaps in evaluating AI-based systems with respect to acceptability and user experience, accountability and ethical impact.

Topics of interest thus include, but are not limited to:
- transparent and explainable AI-based systems
- personalization, recommendation and adaptation
- UI paradigms for interacting with intelligent algorithms
- presentation and interaction design
- user control of intelligent algorithms
- mixed-initiative interaction
- user-centric evaluation of AI-based systems
- ethical and legal aspects of AI-based systems

2 GOALS, PROGRAM AND AUDIENCE

The workshop *goals* are 1) establishing a community of researchers within the GI and the HCI SIG for this important and emerging topic, fostering knowledge exchange and networking, 2) providing a platform to present and discuss scientific work on recent developments relevant with respect to the topics of the workshop, and 3) developing a research agenda for future work on interactive AI-based systems.

The workshop is planned as a full-day event, to be held in conjunction with the MuC 2020 conference in Magdeburg. The workshop will be split in two parts:

The *first part* of the workshop will be devoted to the presentation of scientific work addressing concepts, ongoing developments and empirical evaluations within the thematic scope. For this, we will publish a Call for Papers on the workshop website (https://ucai2020.wordpress.com) and distribute it accordingly. We will accept position papers of 2 pages and full papers of 4-6 pages in length (excluding references), submitted via *ConfTool* until June 5th, 2020. Papers will be peer-reviewed by at least two reviewers from a program committee consisting of the workshop organizers and others. In accordance with the timeline published for MuC 2020, acceptance notifications will be sent out July 3rd, 2020. Camera-ready versions will be due July 10th, 2020.

Authors of accepted full papers will be invited to orally present their work at the workshop, including discussion with the audience. In a small poster session (possibly during coffee), authors of accepted position papers will be asked to present their work. We plan to take and classify notes for the interactive second part of the workshop.

The *second part* of the workshop will focus on discussion, networking, and especially the development of a research agenda on future work. The topics identified beforehand based on accepted submissions as well as in the first part of the workshop will be reviewed with the workshop attendees in order to adapt or extend them. Next, single topics will be discussed in smaller groups in order to characterize important elements, finding main opportunities and identifying pain points, for the agenda for future research on user-centered AI-based systems which we will put together afterwards and made accessible via the workshop website.

After the workshop, we plan to publish accepted papers in the *MuC Workshop Proceedings* accessible through the GI digital library. Moreover, we will invite authors of accepted full papers to prepare extended versions for publication in a special issue of *i-com – Journal of Interactive Media*.

We welcome participants both from academia and industry. The *target audience* includes, among others, HCI practitioners and developers that aim at using AI techniques as well as researchers including (PhD) students active at the intersection of HCI and AI, or in one of the specific disciplines.

3   ORGANIZERS

The workshop will be jointly organized by two working groups of the GI Special Interest Group on HCI, the recently founded working group *Nutzer-zentrierte Künstliche Intelligenz* (NKI) and the working group *Adaptivität und Benutzermodellierung in interaktiven Softwaresystemen* (ABIS). Members of the organization committee are:

- **Mirjam Augstein** is a professor of Personalized and Collaborative Systems at the Department of Communication and Knowledge Media of the University of Applied Sciences Upper Austria. She also heads the Research Group PEEC (PErsonalized Environments and Collaborative Systems). Her main research interests include Adaptive Systems and Computer-Supported Cooperative Work. Further, she is interested in User Experience, interaction methods and novel user interfaces. Mirjam is chair of the GI special interest group ABIS on adaptivity and user modeling in interactive software systems and vice chair of the German ACM SIGCHI chapter. She has co-organized several international workshops on adaptivity, user modeling and collaboration and has served on the program committee and as a reviewer of numerous HCI-related conferences (e.g., ACM ISS, ACM CHI, ACM ICMI, ACM RecSys, ACM TEI).
- **Daniel Buschek** leads the Junior Research Group on HCI + AI at the University of Bayreuth, funded by the Zentrum Digitalisierung.Bayern (ZD.B). His research combines Human-Computer-Interaction and Machine Learning / Artificial Intelligence, both to improve user interfaces with computational methods and to render intelligent systems more interactive and explorable. Previously, he worked at the Media Informatics Group at LMU Munich, where he also completed his doctoral studies, as well as at the University of Glasgow and Aalto University, Helsinki.
- **Eelco Herder** is an assistant professor at the Digital Security Group at Radboud Universiteit Nijmegen, the Netherlands.

His research focuses on the fine balance between the benefits of personalization and perceived and actual risks associated with privacy matters. He is currently Vice Chair of ACM SIGWEB and board member and information officer of User Modeling Inc.
- **Benedikt Loepp** is a final year PhD student at the University of Duisburg-Essen with main research interests at the intersection of HCI and Machine Learning, focusing on recommender systems, especially interactive approaches and preference elicitation mechanisms.
- **Enes Yigitbas** is researcher in the Database and Information Systems group of the Computer Science Department at Paderborn University. He received his PhD in the year 2019 in software engineering from Paderborn University. His main research interests lie in the area of model-driven engineering, human-computer interaction, and artificial intelligence.
- **Jürgen Ziegler** is a full professor in the Department of Computer Science and Applied Cognitive Science at the University of Duisburg-Essen where he directs the Interactive Systems Research Group. His main research interests lie in the areas of human-computer interaction, human-AI cooperation, recommender systems, information visualization, and health applications. Among other scientific functions, he is currently editor-in-chief of the Journal of Interactive Media and Chair of the GI Working Group on User-Centered Artificial Intelligence (NKI).