Co-Designing Personas for User Experience and Engagement in Automation

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ABSTRACT

The aim of this workshop is to engage in co-design of personas to explore the interplay of autonomous technologies with user experience and engagement. Automating a process that is embedded into people's everyday lives and activities will surely impact their experience. In a time where there is strong push towards more and more automation in our daily life, the workshop will explore the value of co-design in bringing to the fore the opportunities and issues of such trend on users' experiences and engagements in multiple contexts such as work, health, entertainment and learning. Through the co-design of personas in future scenarios of automation the workshop will concretely identify valuable automation design goals for user experience and engagement drawing on participants' knowledge from industry projects and academic research.Tree concrete outcomes from the workshop are the following:

CCS CONCEPTS

• **Human-centered computing** → Interaction design; Interaction design process and methods; Participatory design.

KEYWORDS

Automation, Personas, User Experience, Interaction Design, Co-Design

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1 INTRODUCTION

Socio-Technical System Design (STSD) developments have identified and addressed several problems in understanding and developing complex autonomous systems. Despite many positive outcomes, these methods have not materially changed industrial software engineering practices. Two of the main reasons behind this is not knowing your users' persona well and involving them only in the testing stage of any new system development instead of the design process [4, 5, 8]. Automation allows designers to transfer the burden from operators to machine by re-allocating the system tasks that were previously performed by human. Many researchers have already studied different aspects of user experience (UX) in the implementation of advanced interactive technologies employing automation in different platforms [1, 3, 6, 9]. A key insight from this body of research is that these technologies can improve the end-users' experience but not necessarily and automatically guarantee a positive response from users. More studies on user experience and innovation are needed in light of advances and growing uses of automation technologies [3].

There is a significant value in working to further develop and refine design guidelines for human-AI interaction [2, 7]. There is a need for cooperation and better communication in human teams and individuals and AI systems to achieve better UX goals in automation scenarios. Hence, developments towards future autonomous systems need to be carefully co-designed in order to achieve expected service quality goals for end-users.

In order to explore the value of cooperation and communication in human teams designing automation, we will engage with personas as a design artefact in answering a number of questions: How co-designing with stakeholders can help bring UX and engagement to the centre of automation? How using personas can lead to optimal allocation between human counterparts and autonomous

future technologies? How personas can support situation and/or automation awareness? How to evaluate personas to assess the impact of automation on user engagement.

2 CO-DESIGN METHODS AND WORKSHOP STRUCTURE

This full day workshop will use future scenarios for automation touching on several domains such as work, entertainment and learning provided by accepted participants before the date of the workshop. In the context of these scenarios, co-design activities of persona artefacts for each scenario will take place in the first stage of the workshop. Personas created at the workshop will explore and provide potential answers for the workshop questions and reveal the value of co-design in eliciting opportunities for improved UX and engagement in automation.

The second stage of the workshop will discuss and integrate the personas and associated answers in order to create an initial list of automation design goals for UX and engagement. These will be used to outline future prototypes with a view to realize them through industry partners and funded projects. The role of personas as a co-design artefact and practice in leading towards these design goals will be evaluated.

2.1 Participants Recruitment

Participants will submit their interest by submitting a position statement confirming their background, research interest and future scenario of automation highlighting opportunities and/or issues for UX and engagement in one domain from work, health, entertainment and learning.

Key Dates: call for participation: 20th of September; confirmation of acceptance of position papers with scenarios: 30th of September; curated future automation scenarios to be used in the workshop: 15th of October; workshop: 26th of October.

2.2 Workshop Outcomes

(i) Realise some of the personas and scenarios created at the workshop into prototypes that after the workshop can be evaluated by industry partners or intended user audiences.

(ii) Publish in a relevant journal or conference the activities and product of the workshop reporting on the experience co-designing personas for automation and the identified design goals for user experience and engagement across several domains;

(iii) Organise a special issue in a relevant journal calling for papers that touch on design goals identified at the workshop as relevant for co-designing UX and engagement for automation.

3 ORGANISERS

Jose Abdelnour Nocera

José is Associate Professor in Sociotechnical Design and Head of the Sociotechnical Centre for Innovation and User Experience at the University of West London. He is the current Chair for IFIP TC 13.8 working group in Interaction Design for International Development as well as Chair for the British Computer Society Sociotechnical Specialist Group. His interests lie in the sociotechnical and cultural aspects of systems design, development and use.

Daniel Cabrero

Daniel is a user experience researcher based in London, UK. Professionally seasoned through cross-cultural digital projects in the UK, US, India, South Africa and Namibia, he currently consults for various UK government organisations. Daniel advocates for a balance between User-Centred Design, Participatory Design and locale epistemologies to best elicit situated user requirements. He holds a PhD in Human-Computer Interaction with specialisation on User-Created Personas, i.e. personas co-designed together with users.

Pedro Campos

Pedro is Associate Professor with Habilitation at the University of Madeira, Portugal, and scientific director of the Madeira Interactive Technologies Institute. Pedro leads the Experience Augmentation group, bridging cognitive augmentation with experience design and exploring novel systems to augment human cognition and to design better user experiences.

Torkil Clemmensen

Torkil is a Professor at the Department of IT Management, Copenhagen Business School, Denmark. His interest is in Human-Computer Interaction, in particular psychology as a science of design. The focus of his research is on cultural psychological perspectives on usability and user experience. He is the Danish representative in IFIP (International Federation of Information Processing) TC 13 (Technical committee on Human-Computer Interaction), and vice-chair of the Working Group 13.6 on Human Work Interaction Design (HWID.

Robin Gissing

Robbin is an Innovation Technologist in senior management in Heathrow with experience in the area of business innovation with technology. He has particular interest in the socioeconomic factors of industry 4.0, Automatous Vehicle, Start-Up/SME scouting, Sustainability & futurism. Having practical and industrial experience and coming from academic background Robin also has experience in mobility platforms, technology enhancement learning pedagogy and user training.

Frederica Gonçalves

Frederica is an Assistant Professor at University of Madeira and Senior Researcher at ITI/LARSyS, Portugal. Her research interests lie upon HCI, Creativity, Cognitive Augmentation and Persuasive Computing, and design for work. She has recently published papers and co-edited a Springer book on designing engaging automation. She is the secretary of IFIP TC 13 working group 13.6 on human-work interaction design since October 2018.

Lene Nielsen

Lene is an Associate Professor at ITU, Department of Business IT and Head of the TIME (Technology, Innovation, Management and Entrepreneurship) research group. Her research focus on personas, and she was the first in the world to write a PhD about personas. Her research topics include the many aspects of the development and use of personas, such as global personas, personas based on quantitative data, persona descriptions as communication to specific and different audiences, and the relationship between persona description and the use of personas in agile development and service design. She has published two books on personas and more than 80 papers.

Parisa Saadati

Parisa is an IT lecturer in Enterprise Development, Digital Commerce and Innovation Management in University of West London and Ulster University. She is currently researching through her PhD topics on human-work interaction design in automated systems and Industry 4.0 technologies. She has a BSc in software engineering from Tehran University and MSc in Multimedia Systems from London Metropolitan University, UK.

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