

D4.5 - Interaction Paradigm Methodology - Revised

This report corresponds to Deliverable D4.5 - Interaction Paradigm Methodology - Revised of the ALMA project. This deliverable will extend current participatory design and generative design methodologies to incorporate the role of an intelligent system in the interaction loop, where agency is revealed and shared by the human user and the AML system. We will also provide new visualization methods that help novice users understand the state of the algorithm in terms they can understand.

Our research in the field of Human-Computer Interaction (HCI) focuses on human-centered AI, i.e. how to create intelligent interactive systems with a measurably positive impact on human users. We seek to design “human-computer partnerships” that combine human skills and system capabilities so that humans and intelligent agents perform better together than either individually. This requires not only taking advantage of the best characteristics of each, but also considering how to improve human capabilities over time, thus “upskilling” rather than deskilling or replacing the users of these systems.

This deliverable first provides background about our research approach and then describes our analysis of the key challenges to creating human-computer partnerships. We then describe our participatory design and generative design methodologies to explain how they can be applied to designing different kinds of interaction loops where agency is revealed and shared by the human user and the AML system. We also illustrate how different visualization methods can help novice users understand the state of the algorithm in terms they can understand.