

D4.2 - Human-AML Interaction (Revised)

The goal of the Deliverable D4.2 - Human-AML Interaction (Revised) is to give insight into current research on exploring machine learning model capabilities and making them more accessible to end-users. While there are a number of factors involved in educating and empowering end-users of machine learning applications like AML, we focus in this deliverable mainly on interactive and active machine learning and its potential for increasing machine learning literacy.

The previous deliverable D4.1 - Human-AML Interaction (Initial) focused mainly on the interaction between human and machines and discussed the underlying concepts such as Grounding and Human-centered Explainability. In this deliverable we first indicated how to expand on this notion by introducing more cognitive theories, such as theory of mind, which potential we briefly outline. However, since the previous deliverable we shifted our focus more towards making algebraic machine learning (AML) easier to understand, train and apply in a creative context. The interaction paradigm we applied to make AML more accessible is Interactive Machine Learning (IML) allowing users to gradually train a model through interaction on a particular task. This enables users to better understand the potentials and limitations of ML approaches while also making them more accessible to a wider audience. We present insights into the active machine learning and machine teaching paradigms, emphasizing the importance of end-user participation in each teaching step of complex machine learning models in order to make them more understandable and applicable to real-world applications. We finalize the potential of such an interactive approach for ML literacy, which has received increased attention in recent years due to the proliferation of ML applications in everyday use.

We further provide insights in how to apply these paradigms to AML and present an outlook of the used principles applied in D4.8 - Working Prototype and Designs (Revised).