BEHAIV: 'AI for understanding human behavior in professional settings'

Myra Spiliopoulou Sławomir Nowaczyk
Jerzy Stefanowski Marco Ragni

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The Workshop

A substantial amount of research has been devoted to the role of Artificial Intelligence (AI) in understanding and supporting people at their work. This applies to various areas of their professional work. There are mature AI solutions to support medical practitioners for diagnosis, decision-making, treatment planning, and patient monitoring; to support managers with logistics, decision-making, financial planning, and auditing; and teachers with e-learning platforms and student performance assessment tools. However, many solutions, even interactive ones, can neither perceive nor anticipate the important condition of the working professionals - including fatigue, distress, and cognitive overload. Moreover, research on using AI to better understand human evaluation of the places in which they work, or using these results for designing better conditions, is also in the initial phase. Based on the review of related works, we claim that most of the current research is dedicated to using various AI approaches for understanding the behaviour of people in different contexts or built environments. In the case of human work environments, at best, this concerns the behaviour of customers, of patients, of the users of services. The research on analysing, explaining, and potentially understanding how people behave in professional settings is much more dispersed. It is also worth considering the use of AI with Neurocognitive or Psychological Approaches, Affective Computing and Emotive User Interfaces, and Explainable AI new methods. Moreover, there is a lack of broad social research on how people perceive AI in various types of labour markets from different points of view.

The goal of the BEHAIV workshop is to bring together researchers working on AI in support of professionals, to understand their expectations and information demands during decision making, to help them anticipate signals calling their attention, to detect fatigue and disturbances, to promote safety and satisfaction at work. Examples of professionals are: teachers who need to deal with foundational models used by their students, teachers who want to exploit AI in their courses, doctors who interact with models during treatment planing, managers who receive AI-collected pieces of information and need to make reliable

decisions on them and also from the point of view of their certain decisions on supporting the execution of certain actions by their employees by automatic AI tools (e.g. language models, cockpit tools), designers of new facilities in which people work.

We solicited contributions on the role of AI on any aspects of understanding the behaviour of professionals. Our programme features six papers that reflect the broad range of different research on understanding the behaviour of professionals and on supporting them with AI methods or intelligent software tools.

Explanations are pivotal for supporting people who interact with AI as part of their business. The paper 'Explainable Next-Purchase Recommendations: A Multistakeholder Framework' takes a holistic perspective on explaining recommendations by taking the priorities of multiple stakeholders into account. The paper 'Comparing visual tools for pairwise comparisons of tabular data' investigates visualization options to support professionals who compare and classify medical recordings. Sport professionals are the target group of the work 'Application of Spatio-Temporal Graph Convolutional Networks in Strength Sports: Predicting the One-Repetition Maximum (1-RM)'. Highlighting anomalies in an interpretable way is the subject of 'Counterfactual Explanation for Anomaly Detection using Graph Neural Network'. The work 'Embedding Analogies for Evaluating Emotion in LLM-Generated Utterances' focuses on capturing emotion, an aspect of human behaviour that is essential in the workplace as much as in the private context. Finally, the paper 'Smart but Safe: How Industrial AI Challenges Existing Occupational Safety Regulations' departs from the individual behaviour to investigate the subject of safety in the industrial context.

The complete programme of the workshop, together with the keynote speech by Dr. Jens Dörpinghaus (Federal Institute for Vocational Education and Training (BIBB), University of Koblenz) on 'The perception of AI in different labour market data' and the panel discussion, can be found at `https://slawomir-nowaczyk.github.io/BEHAIV-2025`. We would like to congratulate our authors and wish all workshop participants a productive day at BEHAIV'2025 on October 25, 2025, in Bologna.

The workshop organizers