Supporting Human Behaviours using AI Technology: State of the art, challenge and research agenda

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A prominent area of research within the Hybrid Intelligence domain focuses on Artificial Intelligence systems designed to support individuals in voluntarily adapting their behaviour. This technological support can play a valuable role in domains such as health, sustainability and justice, for example, by helping people adopt healthier lifestyle patterns, encouraging more sustainable choices, empowering individuals to manage chronic diseases, or supporting victims of crimes in their healing process.

Key to developing effective behaviour support technologies is understanding why people do what they do (by learning about their motivations, habits, capabilities, and needs), so that the offered support is timely and targeted at a pivotal mechanism. AI-related technologies can contribute to deepening this understanding, e.g., machine learning of observational data to gain insights in behavioural patterns, cognitive models to reason about cognitive aspects such as motivation and self-efficacy, conversational AI such as LLMs and chatbots to engage with people, or VR/AR approaches for training people or for providing visual insight into possible scenarios.

However, effectiveness is not the only relevant consideration to take into account when designing behaviour change support systems. The key to developing responsible behaviour support technologies is identifying and implementing strategies to support individuals on their path of behaviour change in ways that align with core social values such as freedom, autonomy, and (social) justice.

Especially in a time when there are many (commercial) efforts to use AI technology to subconsciously influence (individual and group) behaviour (e.g., consumer behaviour, voting behaviour), it is important to work on a research agenda that forms a counterbalancing narrative to this development, focusing on the design and development of AI technologies that users can trust by aligning with both public values and the users' own values.

During our interactive workshop, six researchers presented their work in this field. While some of the work focused on fundamental aspects of behaviour change systems, like a framework for instructional decision support (Liu et al.), interactive explanations to resolve misalignments (Wolff et al.), and designing to minimise dependence on technology (Alberts), we also had presentations focused on the use of such systems in different application areas namely to support people during periods of grief (Mishra), to reduce carbon intensity in household electricity consumption (Klein) and to minimise food waste by making people more aware of storage guidelines (Gerritsen).

In these proceedings you can find the full papers behind the presentations, except for the final presentation about food waste reduction, which was presented as work in progress.

The organisers thank all who contributed to the workshop, either by presenting or by joining in the discussions.

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