Navigating the Future: AI's Role in Enhancing Interdisciplinary Team Collaboration

While robots and automation in general have been replacing humans in repetitive and routine labour for many years (Vagia et al., 2016), the role of AI is considered to develop from mere tools to integral teammates (Bradshaw et al., 2007; Rebensky et al., 2022; Rix, 2022), underlined by the emergence of Human-Autonomy Teams (HATs). This transition has been further fueled by recent advancements in the field of Artificial Intelligence. The emergence of advanced large language models (LLMs) for example, have pushed the boundaries of AI capabilities, marking a new era in which machines are able to mimic cognitive human functions (Rai et al., 2019). In an era where human-AI collaboration is on the rise, it is essential to probe deeper into how these teams will function.

Research in this area of HATs is rapidly growing (Seeber et al., 2020), however, most studies are confined to lab settings, emphasising a need for more field research to assess the real-world effectiveness of HATs, especially in the workplace context (Larson & DeChurch, 2020; O'Neill et al., 2022). Thus, this research seeks to address the current limited understanding of the dynamics, complexities, and challenges posed by Human-Autonomy Teams (HATs) within organisational contexts, using ThoughtWorks as an implementation context.

Outcome

Future Scenarios based on real-world collaboration challenges of ThoughtWorks Amsterdam

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analysis framework to fully exploit the value of these concepts, helping to explore the potential of future Human-AI collaboration

Capability Over PURPOSE To develop a compret how various features components suppor different phases or aspects of a process or system OBJECTIVE To develop a compre hensive understanding o how various feature or components support different phases of spects of a process or system.

Roles & Abilities

all features or components

To characterize and understand the diverse roles and abilities that components or agents within a system are envisioned to have.

OBJECTIVE To identify and quantify the roles and abilities of the components or agents, highlighting which are deemed most crucial, and providing insights into the variety and frequency of abilities across

User Interviews

collaboration

To delve deeper into specific features of components, exploring user perceptions, concerns, and requirements, focusing on essential values of Human-AI Collaboration

OBJECTIVE To refine and enrich the description or design of specific features or components by deriving user-centric requirements and considerations ensuring the development remains ethically grounded and value-sensitive, catering to the dynamics of human interaction and

extracted futuristic concepts, indicating the role of AI to support team effectiveness in Human-Autonomy Teams

EXAMPLE

- General Analys

sub-challenge Creating Visibility	featur Digi
FEATURE DESCRIPTION Crafting a digital representation of each participant, the AI ensures that the insights and expertise of all individuals, including those who are reticent or not present at all, can be represented and heard whenever needed.	NEAR F Exist Micro featu ideas these the n parti

ETHICAL IMPLICATIONS

Ethical concerns may arise related to informed consent and data handling, as it is crucial that each participant agrees to the creation and use of their digital twin. Ensuring the digital twin accurately reflects the person's authentic thoughts also poses ethical concerns regarding representation.



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Amsterdam

Autonomy Types

OBJECTIVE

To structure the understanding of how components or agents within a system function and interact, focusing on varying levels of autonomy

To facilitate better integration and interaction between human and non-human agents by determining the appropriate level of autonomy that aligns with task requirements and human capabilities, ensuring respect for human

Concrete Analys

Interaction Flow

To detail the interactions of specific features of components with users in a given context, offering tangible insights into potential user behaviors and interactions

OBJECTIVE To decompose complex functionalities into actionable steps, exploring feasibility and desirability, and translating insights and requirements into tangible prototypes or designs, contextualized with specific scenario

ital Twins

UTURE VALUE ting virtual meeting platforms like Zoom or osoft Teams could offer a "proxy participant" ure that allows users to pre-load talking points or s. This proxy would then automatically present e points in text form during relevant moments in neeting, acting as a stand-in voice for the cipant.

