Using Large Language Models in Business Processes

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1   Abstract

Large language models, such as ChatGPT, provide ample opportunities for organizational work. These models are capable of collecting, integrating, and generating information with no or little human supervision [1]. Despite their wide and rapid uptake, we lack systematic knowledge about how large language models can be used in business processes. Our tutorial sheds light on the organizational, managerial and design-related implications of using large language models in business processes. We present a theoretical framework that integrates and synthesizes research from relevant streams, including task complexity [2], task automation [5], and human-AI delegation [1]. We specify potential opportunities and threats in relation to various forms of tasks, such as decision tasks and judgment tasks. Along these lines, we also explore how the use of large language models may affect the overall outcome of a process, for example, by providing new value propositions. We use, reflect, and discuss the implications of our framework based on real-world examples. Our conceptual framework is relevant to guide future research [e.g. 1] but also inform managerial decisions in organizations [e.g. 3].

Keywords: Large Language Models, BPM, ChatGPT

2 Aims and Contents of the Tutorial

Our tutorial will entail two parts. In the first part, we present a theoretical perspective to explore how large language models can be used in business process. We draw from relevant research streams, such as task complexity [2], task automation [4] and human-AI delegation [1], to specify opportunities and potential threats of using large language models on the levels of specific tasks and the levels of process outcomes. We also consider implications that arise with regards to process outcomes. We present a conceptual framework that is relevant both for future research [e.g. 1] as well as managerial decision-making in organizations [e.g. 3]. In the second part, we will conduct an interactive session where participants will learn about real-world examples before they gather in smaller groups to use our conceptual framework for business-process related tasks. Subsequently, we will have a joint discussion to reflect on the strengths and weaknesses of using large language models in business processes, as well as their implications for BPM in more general terms. To this end, we will discuss implications that arise with regard to the analysis, design and implementation of business processes [4].

3 Intended Audience

Our tutorial focuses on managerial and organizational implications of using large language models in business processes. In that regard, we discuss various aspects that pertain to the analysis, design and performance of certain process-related tasks. Furthermore, we shed light on implications that arise on the level of the overall business process. Against this backdrop, our tutorial addresses researchers who are studying, or planning to study, the role of large language models in business processes. The tutorial speaks to practitioners who are dealing with large language models, and want to know more about their applications, threats and opportunities. A technical focus or background is not required.

References

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