

Introduction to “Digital Transformations of Business Operations” Minitrack

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This year “Digital Transformations of Business Operations” minitrack at HICSS has accepted four papers that explore the increasingly complex roles that advanced information technologies play in healthcare, business operations, and consumer decisions and activities. These papers are as follows:

- *Utilizing AI and Social Media Analytics to Discover Unreported Adverse Side Effects of GLP-1 Receptor Agonists Used for Obesity Treatment*: This paper introduces a digital health methodology leveraging artificial intelligence (AI) and social media analytics to detect unreported adverse side effects (ASEs) associated with a type of obesity drug, GLP-1 RAs. The authors show that by analyzing vast amounts of public data from social media, published clinical research, manufacturers' reports, and AI models like ChatGPT, the proposed digital health methodology can be used to uncover potential ASEs that may have been overlooked during the FDA approval process. This study offers a proactive solution for regulators and manufacturers to enhance drug safety by identifying hidden risks associated with new medications.
- *Towards a Benchmark for Large Language Models for Business Process Management Tasks*: This paper intends to objectively assess the capabilities of LLMs in the Business Process Management (BPM) domain. It systematically compares the performance of open-source and close-source LLMs on four established BPM tasks. It found that while GPT-4 shows a stable performance across all BPM tasks, it is not the best model in terms of performance due to its relatively large inference time and cost per generated token. LLM model selection is task-dependent and should consider more than model size. This paper provides insights into the practical applications of LLMs in BPM, guiding organizations in selecting appropriate models for their specific needs.
- *Applying BPMN and Ontology to Measure Digital Maturity in Construction 4.0 - A case study*: This paper develops a framework to address implementation challenges of the digital transformation, represented by the Construction 4.0 technologies, in the construction industry. The authors

integrate digital maturity models with Business Process Model and Notation (BPMN) to model the digital transformation phases of a case study company. By mapping the transformation steps with an ontology development methodology, the study emphasizes the importance of aligning business and IT strategies, continuous improvement, and strategic innovation management. This research contributes to the growing body of literature on Construction 4.0 by offering a structured approach to evaluate and enhance digital maturity, aiming to help construction organizations achieve successful digital transformation.

- *The Impact of Customer Service Accounts on Social Media Consumer Engagement: A Natural Experiment*: This paper examines whether segregating customer service (CS) interactions into dedicated accounts affects consumer engagement with the Main accounts for brands on social media. Using a large dataset collected from Twitter, the authors observe an overall increase in consumer engagement on Main accounts following the creation of CS accounts. The findings of this study provide important insights for brands to facilitate consumer engagement on social media.