

Editorial Introduction to Issue 41 of CSIMQ: Practical Applications and Methods to Manage Complex Information Systems

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In today's competitive and multifaceted business ecosystem, ensuring the smooth operation of businesses requires choosing appropriate methods and techniques to address the complexity of modern information systems. Small and Medium Enterprises (SMEs) and public organizations often face unique challenges in this regard, such as resource limitations and complying with regulations. To succeed and provide better services in such environments, there is a critical need for research that offers effective strategies for managing these complexities. This issue features articles that provide valuable insights and tools for researchers and practitioners navigating these challenges.

The *first* article, “*The Practice of Business Process Modeling – A Story from the Field*”, authored by *Lena Aggestam* and *Kristens Gudfinnsson* presents the findings of a case study conducted in a Swedish SME. This article illustrates the practical application of business process modeling (BPM) within the SME context, confirming the usefulness of this approach while enriching the body of knowledge with valuable lessons learned. By sharing detailed insights into the challenges and successes encountered during the process, this work sheds light on the practical applications of BPM and provides inspiration for practitioners and researchers striving to bridge the gap between theoretical frameworks and real-world implementation.

The *second* article, “*Development of Social Platforms and New Opportunities in Digital Marketing*”, authored by *Igors Babics* and *Elita Jermolajeva* explores the dynamic evolution of digital marketing and its transformation under the influence of technological advancements. This study examines the interplay between emerging technologies and shifts in consumer behavior, emphasizing their implications for SMEs. The article summarizes the shift in core marketing models and relates them to key underlying technological innovations. Highlighting advancements such as artificial intelligence, augmented reality, and blockchain, the authors provide a detailed analysis of their potential to reshape marketing strategies and tools. By exploring the historical trajectory and future trends in digital marketing, this article can inspire researchers and practitioners to align marketing practices with the rapidly advancing digital landscape.

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The *third* article, “*The Impact of Blockchain Technology on Accounting: A Literature Review*”, authored by *Afrida Putritama, Sony Warsono, Syaiful Ali, and Wuri Handayani* provides a comprehensive review of blockchain's transformative potential in accounting practices, auditing, and financial reporting. Through a literature review, the authors identify blockchain's ability to enhance data transparency, security, and efficiency while highlighting challenges such as integration, regulatory compliance, and technological scalability. The study compiled several research gaps as a foundation for future exploration. These include the need for a stronger theoretical foundation to guide the integration of blockchain in accounting, more empirical studies to examine real-world implementation, and standardized accounting regulations and guidelines to ensure consistency and reliability. Additionally, the study emphasizes addressing scalability challenges and the economic feasibility of blockchain, enhancing understanding and awareness among businesses, and investigating the impact of blockchain on SMEs and non-profit organizations.

The *fourth* article, “*Analysis of Algorithms for Detecting Users' Behavioral Models based on Sessions Data*”, authored by *Vitaly Zabiniako, Toms Rožkalns, Erika Nazaruka and Jurijs Kornienko* presents a comprehensive study on clustering algorithms designed to uncover behavioral models from user session data. Addressing challenges such as large dataset sizes, unknown cluster numbers, and computational efficiency, the authors evaluate a variety of techniques, including the Longest Common Subsequence (LCS) and the Louvain algorithm. The work can help practitioners and researchers select appropriate algorithms when analyzing session data, which is a common challenge and an important aspect of managing digital services in practice.

The *fifth* article, “*Text Retrieval in Restricted Domains by Pairwise Term Co-occurrence*”, authored by *Eriks Sneiders and Aron Henriksson* developed lightweight text similarity calculation methods that operate without reliance on supervised learning or generative large language models. Their research demonstrates that their method can achieve retrieval precision comparable to state-of-the-art models such as BERT embeddings, particularly in contexts where fine-tuning large models is impractical, or data is limited. This work highlights applications in restricted domains, such as public organizations, and underscores the potential of pairwise term co-occurrence to improve text similarity calculations. The method can also help organizations and businesses which are constrained by resources or privacy concerns.

The CSIMQ editorial team would like to thank the reviewers for providing valuable feedback for the submitted articles and all the authors for submitting their articles.