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Paper title: A Road-map for Mining Business Process Models via Artificial Intelligence Techniques

Keywords specific to the paper: Business process mining, Artificial Intelligence, Machine Learning, Deep Learning

The article provides an in-depth exploration of how artificial intelligence (AI) techniques, particularly machine learning (ML) and deep learning (DL), are revolutionizing the field of business process mining (BPM). It introduces various AI models, including neural networks, recurrent neural networks (RNNs), convolutional neural networks (CNNs), and generative adversarial networks (GANs), which are utilized for analyzing business process data and extracting meaningful insights.

By leveraging ML and DL, these techniques enhance traditional BPM approaches by overcoming limitations such as noise, hidden tasks, and redundant processes in business process data. AI-powered BPM approaches use descriptive, diagnostic, predictive, prescriptive, and cognitive techniques to analyze event logs, identify anomalies, predict future issues, and provide recommendations for optimizing business processes.

The paper emphasizes the importance of preprocessing event log data to remove anomalies and extract relevant features necessary for prediction and recommendation systems. It discusses the integration of semantics and hidden rules extracted from log data to design more robust models. Additionally, it highlights the role of parallel and distributed computing in handling large volumes of data efficiently.

Overall, the paper offers a comprehensive roadmap for implementing AI-powered BPM approaches, emphasizing the potential for organizations to gain deeper insights into their business processes and drive improvements in efficiency and performance.

Contribution to the proposed idea: The paper contributes to the idea of using AI techniques to improve business process mining by demonstrating how these models can overcome limitations of traditional process mining approaches. For example, AI-powered techniques can handle noise, hidden tasks, and redundant processes more effectively, leading to more accurate and insightful process models.