Support of machine learning in Process mining and decision making

The document focuses on the use of Process Mining and Machine Learning to support decision-making in systems design, with a specific emphasis on the application of these techniques in the context of an electric torch design process. The presents study a double layer framework that aims to identify patterns significant process and parameters for decision-making in the context design. It discusses relevance the of process mining and machine learning techniques in automatically discovering process and patterns predicting activity parameters, highlighting importance the supervised classification of in predicting new values from known.

dataThe paper provides a literature review the on coupling of Process Mining and Machine Learning techniques, various citing research works link that techniques both their and collaborative applications in writing, case data extraction, and association rule mining. It also outlines the process mining which layer, involves transforming process executions' traces into event logs and the extracting most frequent patterns of the product design process. Additionally, the machine learning layer aims to predict the most frequent parameters for each activity the of selected.

patternA case study on the electric torch design process presented is to illustrate the application the proposed of technique, demonstrating its in feasibility aiding engineers during the design or redesign of a product. The document also outlines future work, including design addressing processes with more complex gateways evaluating and impact the of the proposed technique performance on indicators.

The document discusses the integration of Process Mining and Learning Machine techniques to support decision-making in systems design, which is closely related to the field of artificial intelligence (AI Learning Machine)., subset a of AI, is a key component of the framework proposed, as is it used to predict activity parameters and resources for design product. processes document The references also the use supervised of algorithms classification, a fundamental aspect of machine learning predict to, new values from known data., Additionally the document the mentions of use reinforcement learning, another AI technique, to develop software agents that learn from their own and experiences feedback from the environment.

Furthermore, the document cites research various works that link Process Mining and Learning Machine techniques, the demonstrating relevance of AI in the context of product and design-making decision. The application of AI-related tools such as Weka, a machine learning framework, and the use of AI techniques in predicting response consumer to product form further underscore the connection between the document's content and artificial intelligence.

In summary, the document's focus on machine learning, reinforcement learning, and the application of AI techniques in product design and decision clearly-making demonstrates its relevance to field the of artificial intelligence.

In conclusion, the provides document valuable into insights the integration of process mining and machine learning to facilitate decision-making in design systems It. a offers structured framework that leverages these techniques to streamline and optimize the product design process, paving the for way further research and development in this domain. The study contributes to the understanding of how these advanced technologies can be harnessed to support decision in-making the, design process potential with applications in engineering and various product development contexts.