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Paper title: Explainable artificial intelligence for improved modeling process.
Source: Google scholar

If we focus on the document in question, we can see that it delves deeply into business process modeling while having an emphasis on integrating artificial intelligence and it does discuss how to improve model business processes using contemporary AI technology, especially machine learning.
The study also investigates the concept of explainable artificial intelligence (XAI) to enhance the interpretability and process mining effectiveness of these models.

If we look at the introduction, it draws attention to the difficulties that companies encounter in integrating a variety of high-quality information sources because of the enormous volumes of data that are generated and the constraints of standard business process models. It highlights how machine learning (ML) can handle high-dimensional data and how using these technologies to process modeling is still relatively uncharted ground.

The selection and preprocessing of five benchmark datasets from a variety of fields, such as loan applications, road traffic management, and healthcare, are covered in this part. Process mining (PM) tasks involving binary classification are carried out using these datasets. The Following dataset are included.

BPIC 2017: This study focuses on a Dutch financial institution's loan application procedures.
BPIC 2018: Concerns EU grant application procedures for agriculture.
Traffic Fine Management: Keeps track of the fines for moving violations overseen by the Italian government.
COVID: Contains information from patients with COVID-19 who are admitted to an intensive care unit.

Hospital billing is the process of charging for healthcare services rendered by a local hospital.
The hospital dataset, which has almost all duplicate data, serves as an example of how to handle predictive maintenance (PM) datasets with high duplication rates in the text. This lack of variation in the dataset poses issues for machine learning. It employs n-grams to vectorize event sequences for conventional machine learning models in order to analyze these datasets. It also emphasizes the usefulness of transformer models in directly processing sequences and learning event embeddings, thereby avoiding the drawbacks of high-dimensional encoding techniques like one-hot encoding.

The article explores the application of Explainable AI (XAI) approaches to find patterns in predictive maintenance (PM) data, emphasizing global explanations of data relationships as opposed to explanations for individual decisions. The objective is to gain a global understanding of the PM process by identifying important characteristics and correlations using feature selection techniques for both linear and non-linear models. One important discovery is the identification of features that may cause information leakage. This led to the elimination of biased features from the datasets in order to avoid unimportant results.
The outstanding classification performance of both traditional and contemporary machine learning (ML) classifiers is highlighted in the text along with the efficient preparation and utilization of process data for training. It highlights that full sequence information is very useful for transformer models, as opposed to more basic representations such as 1-gram. Utilizing Explainable AI (XAI) technology is essential to preventing problems such as data leaks and to get important insights into the significance of occurrences or data sequences. These realizations are crucial for investigating the process in more detail and maybe enhancing its results.

In order to better understand how various model designs and encoding strategies affect feature relevance outcomes, the article makes some recommendations for future study directions.
It also suggests examining the effects of adding more event attributes to the models' learning procedures in order to improve the representations that are acquired from the data.