

ABSTRACT

RECOMMENDATION GENERATION FOR PERFORMANCE IMPROVEMENT BY USING CROSS-ORGANIZATIONAL PROCESS MINING

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Process mining is a relatively young and developing research area with the main idea of discovering, monitoring and improving processes by extracting information from the event logs. With the increase of cloud computing and shared infrastructures, event logs of multiple organizations are available for analysis where cross-organizational process mining stands with the opportunity for organizations learning from each other. The approach proposed in this study mines process models of organizations and calculates performance indicators; followed by clustering of organizations based on performance indicators and finally spots mismatches between the process models to generate recommendations. This approach is implemented as extensible and configurable plugin set in ProM framework and tested by synthetic and real life logs where successful and suitable results are achieved within evaluation metrics. Generated recommendation results indicate that the use of this approach considerably helps users to focus on the areas of process models with potential performance improvement, which are difficult to spot manually and visually.

Keywords: Process Mining, Cross-organizational Process Mining, Recommendation Generation, Process Performance Improvement