

Abstract

The At the beginning of 2019, the COVID-19 pandemic entered the country of Indonesia resulting in all learning activities being carried out online in all cities of Indonesia. Likewise, Telkom University concentrates all teaching and learning activities online using the CeLOE Learning Management System. Learning Management System is a system that helps lecturers in managing teaching and learning activities independently in educational institutions. CeLOE is a learning management system of Telkom University developed based on Moodle. In this study, we analyse the CeLOE event log using the process mining method. The goal is to find out the learning patterns of students using CeLOE during the COVID-19 pandemic. This research case study focuses on the activities of students of the Telkom University S1 Informatics study program for the first semester of 2020/2021 in using CeLOE LMS. The analysis of this study conducted a comparison of the performance of three variants of the inductive miner (IM) algorithm through conformance checking values. The results of the analysis obtained are value of conformance checking from the three variants of the inductive miner (IM) algorithm have an average fitness value of up to 1 prove that the inductive miner (IM) algorithm can make a model based on the event log well. Besides that, it has a fairly high precision value with a value range of 0.750-0.850 shows that the inductive miner (IM) makes a process model with relatively many variations of activities outside the event log and the IM process model is overfitting for all variants of the IM algorithm. Inductive miner (IM) is the best inductive miner (IM) algorithm variant with a fitness value of 1.0, precision value of 0.750, and the generalization value of this algorithm is relatively high (0.984). It is hoped that this research can contribute to the addition of new perspectives related to the implementation of process mining using inductive miner (IM) algorithm in the field of education.

Keywords: Learning Management System, CeLOE, Process Mining, Inductive Miner, Event log
