

Towards a Distributed Computation Platform Tailored for Educational Process Discovery and Analysis

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Abstract : Given the ever changing needs of the job markets, education and training centers are increasingly held accountable for student success. Therefore, education and training centers have to focus on ways to streamline their offers and educational processes in order to achieve the highest level of quality in curriculum contents and managerial decisions. Educational process mining is an emerging field in the educational data mining (EDM) discipline, concerned with developing methods to discover, analyze and provide a visual representation of complete educational processes. In this paper, we present our distributed computation platform which allows different education centers and institutions to load their data and access to advanced data mining and process mining services. To achieve this, we present also a comparative study of the different clustering techniques developed in the context of process mining to partition efficiently educational traces. Our goal is to find the best strategy for distributing heavy analysis computations on many processing nodes of our platform.

Keywords : educational process mining, distributed process mining, clustering, distributed platform, educational data mining, ProM

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