ABSTRACT

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IMPLEMENTATION OF BUSINESS INTELLIGENCE DASHBOARD WITH DATA MINING CLUSTERING FOR STUDENT ACADEMIC ACHIEVEMENT

(xiii + 86)

Higher education in Indonesia continue to grow in every year. This can be seen from the results of the Higher Educational Statistical Year Book 2018 by the Ministry of Research and Technology of Indonesia which states there are 3,189 (2013), 3,280 (2014), 3,246 (2015), 3,275 (2016), 3,276 (2017), and 3,293 (2018). So that every university is required to always improve their quality in order to compete, one of the indicators is student achievement. This study aims to develop a business intelligence (BI) dashboard to help management in making decisions on student academic achievement. System Development Life Cycle is used as system development method and Five Layer BI used as its architecture. The Nine Step's Design method is used in data warehouse design. In data processing, data mining clustering with K-Means algorithm is used. Result of this research is a dashboard that display the distribution, ranking and grouping of students' grade based on instructor, course, and subject. Based on the information displayed it can be concluded that a class with a low number of students will be more optimal for student GPA. The policy that can be taken by management is to increase the number of classes and reduce the number of students in each class.

Bibliography (2001-2019)