Universiti Teknologi MARA

Application of Fuzzy Logic on Students' Performance in Calculus

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Report submitted in fulfillment of the requirements for Bachelor of Science (Hons.) Management Mathematics Faculty of Computer and Mathematical Sciences

November 2018

STUDENT'S DECLARATION

I certify that this report and the research to which it refers are the product of my own work and that any ideas or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.

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NOVEMBER 30, 2018

ABSTRACT

There is a significant decline recently at UiTM Perlis Branch with students' performance in the mathematics subject such as Calculus. This rate of failure gives a big impact to students' achievements at university level. It is important to know what is affecting students' performance in mathematics subjects because it can help to reduce the rate of failure among students at UiTM Perlis Branch. The aims for this research is to investigate the relationship between the previous SPM grades and performance in Calculus. This study is also used to determine whether students' attitudes towards mathematics affect students' performance. The fuzzy logic approach has been used to evaluate the academic performance of students. By using fuzzy logic approach, the input are analyzed by MATLAB (version R2017a) to obtain the final output. The results from the study shows mathematical background affects most of the students' performance in Calculus compared to students' attitudes such as students' interest, learning style and awareness towards mathematics subject.

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