



**Paper 190 – Technology**

**PREDICTION OF STUDENT'S GPA USING MACHINE LEARNING ALGORITHM: THE CASE OF STUDENTS IN AN ORGANIZATIONS OR SOCIAL CLUBS**

**Reymon Rotikan and Green Sandag**

Universitas Klabat

[reymonr@unklab.ac.id](mailto:reymonr@unklab.ac.id) [greensandag@unklab.ac.id](mailto:greensandag@unklab.ac.id)

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**ABSTRACT**

Student participation in an organization or social club may have consequences for decreasing the student's GPA. One of the reason is that the student must devote their time to study, and also time to participate in the activities of the organization or social club. Seeing the tendency of student's GPA is low when are in an organization or social club, therefore in this study, a method based on machine learning algorithms such as Support Vector Machine (SVM), Random Forest, and Naïve Bayes will be developed to predict the GPA of students who wants to join or engaging in an organization or social club. This study aims to determine the social factors that affect student's GPA and build the best predictive models. The cross validation method will be use for the evaluation of the criteria model. The data used in this study are the data of students who are members of an organization or a social club in the last five years. The data obtained will be divided into two datasets, the training dataset used for developing the model and the testing dataset used to validate the model. The expecting results of this study is an efficient method to predict GPA of student who wants to join an organization or social club.

**Keywords: Student, Social Club, Organization, GPA, Machine Learning, Algorithm, Prediction**

