CLASSIFICATION OF RECIPIENTS OF INDONESIAN SMART CARD (KIP-KULIAH) USING THE *K-NEAREST NEIGHBOR* METHOD (STUDY CASE: KALIMANTAN INSTITUTE OF TECHNOLOGY)

Student Name   : Firesta Karangan
ID   : 02191013
Supervisor   : Aditya Putra Pratama, S.Si, M.Si.
Co-Supervisor   : Ramadhan Paninggalih, S.Si., M.Si., M.Sc.

ABSTRACT

The Indonesia Smart Card (KIP-Kuliah) scholarship program is one of the government's efforts to help students who have economic limitations. The *K-Nearest Neighbor* (KNN) method is used to classify prospective scholarship recipients based on relevant variables. The research variables used were the father's occupation, mother's occupation, parents' combined income, number of dependents, and average report card scores. Applying the KNN method will obtain the results of the classification of KIP-College scholarship recipients. The data used in this study is divided into training data and testing data. Training data using data from KIP-College scholarship applicants at ITK in 2020–2021 and testing data using data from KIP-College scholarship applicants at ITK in 2022 In this research, a technique called random *oversampling was needed* to increase the number of samples in the minority class and produce better accuracy values. The proportion of dataset division in this study uses 70:30, 75:25, and 80:20 with the method of random *oversampling* to obtain the best model on the testing data with an accuracy of 91% in the proportion of 70:30 using the best k, namely k = 1.