IMPLEMENTATION OF A CLASSIFICATION ALGORITHM TO DETECT FELDER-SILVERMAN LEARNING STYLE

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ABSTRACT

Learning is a change that is shown in changes in behavior, which is different from before the individual was in a learning situation and after carrying out similar actions. Changes occur as a result of experience or training. Learning style is a privilege for each individual in receiving learning, the right learning style is an important aspect of student success while studying. There are various approaches used by learning scientists to identify student learning styles, one of which is Felder-Silverman. According to Felder-Silverman, student learning styles are categorized into four dimensions, namely processing (active or reflective), input dimension (visual or verbal), perception (sensitivity or intuition) and understanding (sequential or global). This research took samples of STMIK Dharma Wacana students from 16 (sixteen) meetings with a total number of students of 138 (one hundred and thirty eight) people, with a dataset of 414 (four hundred and fourteen) records. Based on the results and discussions that have been carried out, it can be concluded that the accuracy value of 67.88% proves that the Decision Tree and Random Forest algorithms are not well used to classify Felder-Silverman learning styles, the accuracy value of 85.03% for K-Nearest Neighbors proves that the K algorithm -Nearest Neighbors is quite good to use for classification. Then the accuracy value of 97.34% proves that the Naïve Bayes and Neural Network algorithms are very good to use to classify the Felder-Silverman learning styles of STMIK Dharma Wacana Metro students. Active-Intuitive-Visual-Sequential learning style is a learning style obtained based on classification results, after being applied this learning style is declared VALID because as many as 97.35% of the total students have increased learning outcomes scores.

Keywords : Learning Styles, Felder-Silverman, Classification