

Abstract

Expertise of a person will be different with others according to their talents and interest and skill level of person. In the world of education was majorization needed to further develop the skill and talents these students. As with the SMK PANDAWA BUDI LUHUR, there are two major, such as perhotelan and tour and travel.

In this final project implemented a method of decision tree making in the placement of students, namely genetic algorithm and ID3. Genetic algorithm will be combined with W-KNN (weight KNN) to obtain the optimal feature / subject that are considered the best in majorization in SMK PANDAWA BUDI LUHUR. Then ID3 will build a decision tree of genetic algorithm feature optimal output. Genetic algorithm has good ability in optimization problems such as optimization of feature selection. K-nearest neighbor algorithm (k-NN or KNN) is a method for the classification of learning objects based on data that were located closest to the object. While the W-KNN is an extension of KNN by adding weights to each feature. The principle of calculating the same matrix with the KNN neighborhood. Training data projected onto the many-dimensional space, where each dimension represents a feature of the data. The use of genetic algorithms for feature selection and ID3 have a better performance than without the use of genetic algorithms for feature selection.

Based on research that has been done, showing that the combined use of genetic algorithms for feature selection with ID3 produces better accuracy than by not using a genetic algorithm for feature selection.

Keywords: *vacational majorization, genetic algorithm, W-KNN, Feature Selection, ID3.*