

**HIGH SCHOOL MAJOR DETERMINATION CLASSIFICATION
APPLICATION AT MADRASAH ALIYAH NEGERI 2 GRESIK USING
FK-NN METHOD**

By

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ABSTRACT

Madrasah Aliyah Negeri 2 Gresik, is one of the senior high school in Benjeng which conducts majors determination for the 10th grade students who want to continue the study to the 11th grade. The problem that is usually faced by the counselor teacher in the majors determination in that school is that the students are still confused and hesitate to determine the right majors based on their ability, that condition leads to some mistakes in choosing the right majors, so the students feel the difficulty in the academic process. The mistakes lead to the low academic score and the student's achievement in the 11th grade. The development of the determination system that was done in this research used the Fuzzy K-Nearest Neighbor classification method. The fuzzy set generalizes the K-NN classical theory by defining the value of member in the data of each class. The superiority of FK-NN in the field of data recording and the criteria analysis is that it gives alternative recommendation for the suitable majors in senior high school based on the students' interest and ability. Based on the result of the research and the discussion, Fuzzy K-Nearest Neighbor algorithm could give major recommendation for the students in MAN 2 Gresik with the highest accuracy of 85 % which obtained from the first testing using 70 training data and 20 testing data in the experiment of K=6, K=7 and K=8.

Keyword: Data Mining, Classification, Fuzzy K-Nearest Neighbor

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