

EARLY STRATEGIC GUIDANCE FOR HIGHER VOCATIONAL SCHOOL STUDENTS USING SUPPORT VECTOR MACHINES

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ABSTRACT

Academic guidance and orientation is important for vocational schools. In this study, data set of vocational school students are obtained from student affairs central database. The data is filtered and gender, age, geographical region student came from, high-school type, a special high school score of vocational high school student that is used for entering vocational school without exam, and school registration type are taken as six inputs. Academic success and graduation length are the two outputs that are aimed to be predicted. Based on these chosen input and output information, a model is aimed to be developed in order to help advisors in improving academic success and shortening graduation length of their students. Support vector machines based artificial intelligence technique is used. Input sensitivity analyses are also conducted. It is seen from the analyses that academic success and graduation length are both highly affected by gender. Also, academic background has also effect on two outputs in different manners. From the analyses, it can be concluded that the advisors can orient or guide students based on the SVM outputs.

Key Words: Vocational schools, academic guidance, academic success, graduation length, support vector machines, input sensitivity.