ENSEMBLE APPROACH FOR PREDICTIN UNDERGRADUATE COURSES -WITH INTEREST AND ACADEMIC PERFORMANCES

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Abstract

After completed school education, many students select an undergraduate degree program for doing their higher studies and become a valuable person in modern society. Then, a lot of students use online tools or follow advices, instructions from educational experts and instructors and by their parents' wish. Now students follow some trending courses. If they don't have any skills or knowledge, suddenly they try to stop the current degree program. It is wasting time and money. Main problem of this research addressed, on how to select a program in useful way and bright the future. If someone select a wrong course that is a risk for their future. There are some criteria impact to select a suitable course for undergraduate students such as their personal interest, previous academic performances, extracurricular activities, age group, family background, romantic relationship, attendance, etc. And manually, always instructors cannot recommend courses because they have no time for everyone. To speed up process, I proposed an automated system for Sri Lankan students.

This problem mainly divides into two options such as identify on what features mostly impacted to select a suitable course and analysis which machine learning algorithms suits to predict a proper target in proposed system. In this research, recognized the which machine learning models and features that suits to recommend a right course. In this research, have main aspects such as research previous existing systems, created and summarize surveys, and analysis some techniques and algorithms in the machine learning approach to build a good model. According to research existing systems, identify ensemble classification model is the best machine learning approach as the technical solution of selected problem domain.

When finding the mostly impacted attribute for recommending system, created a survey and make interviews with the target audience. Then, by analyzing responses of surveys and answers of interviewers, identified 10 critical factors out of the 33 such as interest, academic performances (A/L, O/L), age,gender,sports, ICT knowledge, etc. After, implemented an ensemble classification model by inputting mentioned features. Accuracy of model is 89.34%.

Keyword – Classification, Ensemble model, Machine Learning