What Will My GPA Be?

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Abstract

In this project, we are going to discuss that how student data would be useful for academic success and result of other related works. We used to help universities to understand their students and teaching efficiency in their institutions by learning from data and also administrators to cope with advising students efficiently. We will develop a software tool which is analyzing and visualizing data from past student enrollments in classes and their grades.
Key Words:
Machine Learning, Python, Analyses, Classifications

Introduction

Our purpose is combining machine learning with our department information such as course grades, students' success, fail rates and etc. We try to enhance student success to show us their future GPAs or course grades. Some of the project members have taken the course of data mining. Besides machine learning, our project includes Database Structure and Web development. We use the Python programming language because it is useful, understandable and very suitable for our project. In order to do our project well, we tried to study various materials, research about the design and to strengthen the programming language

Solution

We make a web application to help and increase student success using machine learning methods and student/lecturer/course data. System is responsible to make a prediction for related functions. Output of the functions indicates how student improve oneself according to results, what critical situation should handle or warn to student for bad results for his/her academic life. In addition, these functions not only usable for students but academic staff as well. Most academic staff be able to access and use these functions. Also, some of the academic staff has different type of prediction function. Furthermore, every academic staff can have detailed report according to their duties.

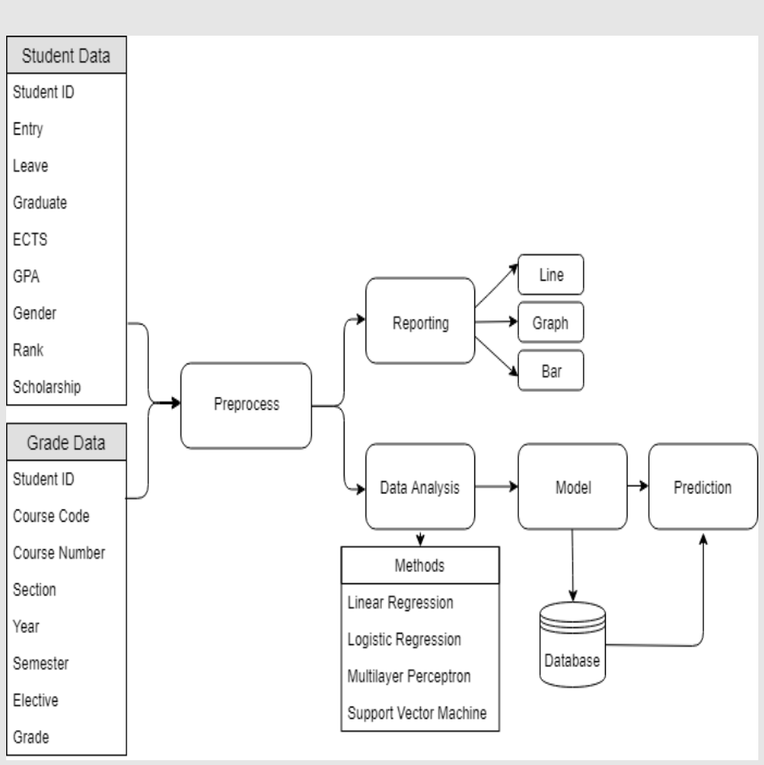

Figure 1 - Flowchart

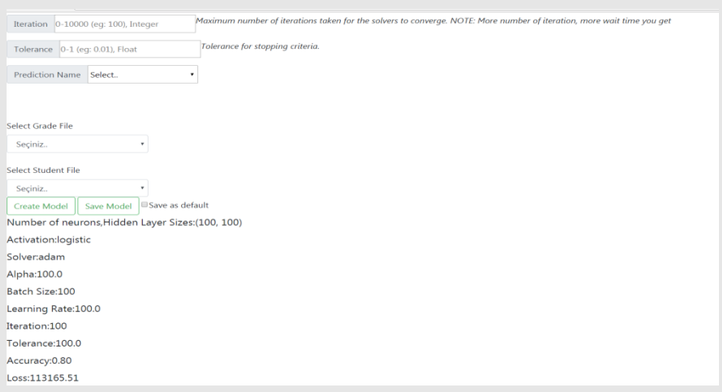

Figure 2 – Student Performance Evaluation System

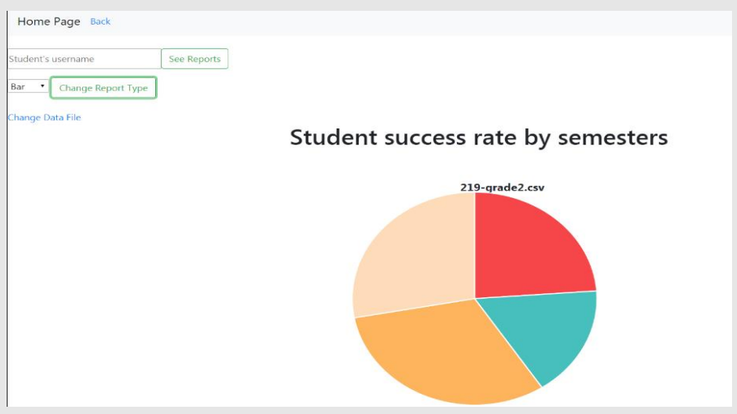

Figure 3– Student Performance Evaluation System

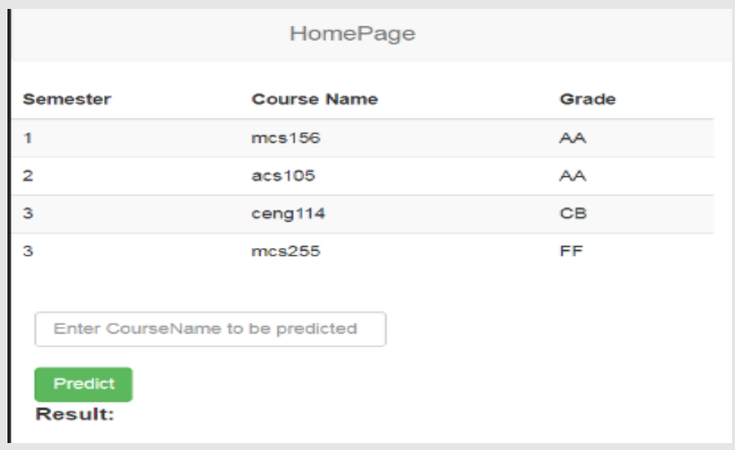

Figure 4– Student Performance Evaluation System

Results & Conclusion

In conclusion,, our project has new features which are different other previous data analysis applications. During the literature research we have searched related projects and figured out how they have been made. Thus, we've gained different perspective for our project and have learned how can we use this knowledge to perform project.

We have learned using new programming languages such as python as programming language, Python was rich in visuality and easy to maintain. Thanks to Python, we used Flask for web development. Flask is a micro framework for Python. We can easily combine Python code to Flask so that way the design of the web site becomes more dynamic. We preferred Python programming language that can perform operations quickly and dynamically because it had a lot of features in its structure. Thus, people entering the system can easily exit the system after using the system and performing the necessary operations. The designed user interface is made more dynamic.

Acknowledgement

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