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Students performance Monitoring System

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ABSTRACT

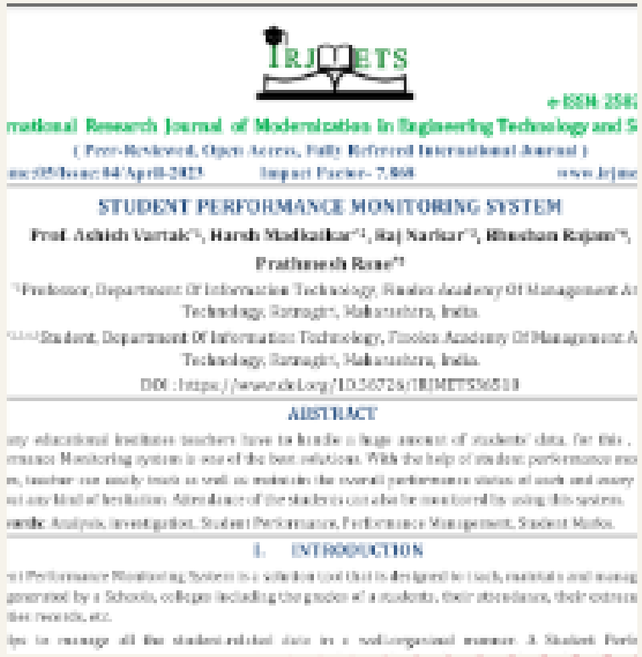
The Student Performance Monitoring System is designed to analyze and predict student performance based on various factors such as gender, nationality, grade, attendance, and parent involvement. Leveraging machine learning algorithms, the system offers insights into student academic outcomes and aids educators in identifying at-risk students who may require additional support.

BASE PAPER

Paper Name - STUDENT PERFORMANCE MONITORING SYSTEM

Authors Names - Prof. Ashish Vartak*1, Harsh Madkaikar*2, Raj Narkar*3, Bhushan Rajam*4, Prathmesh Rane*5

Place and location - Department Of Information Technology, Finolex Academy Of Management And Technology, Ratnagiri, Maharashtra, India.



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STUDENT PERFORMANCE MONITORING SYSTEM

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ABSTRACT

any educational institutes teachers have to handle a huge amount of students' data. For this , rmance Monitoring system is one of the best solutions. With the help of student performance mo m, teacher can easily track as well as maintain the overall performance status of each and every ar any kind of institution. Attendance of the students can also be monitored by using this system.

ords: Analysis, Investigation, Student Performance, Performance Management, Student Marks.

1. INTRODUCTION

a) Performance Monitoring System is a software tool that is designed to track, maintain and manag generated by a Schools, colleges including the grades of a students, their attendance, their extracu their records, etc.

ips to manage all the student-related data in a well-organized manner. A Student Perfo

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LITERATURE REVIEW

Using Fuzzy Logic for Monitoring Students Academic Performance in Higher Education †

Najeeb Ullah Jan *, Shabbar Naqvi and Qambar Ali

Paper Name - Using Fuzzy Logic for Monitoring Students Academic Performance in Higher Education

Authors Names - Najeeb Ullah Jan *, Shabbar Naqvi and Qambar Ali

Place and location - Department of Computer Systems Engineering, Balochistan University of Engineering and Technology Khuzdar, Balochistan 89100, Pakistan

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PROPOSED SOLUTION

Predictive Analytics

- Utilize machine learning algorithms such as Decision Trees, Random Forest, Neural Networks, and Gradient Boosting to predict student performance based on historical data.
- Develop predictive models to forecast academic outcomes, identify at-risk students, and recommend interventions.

Educator Insights

- Generate insights and visualizations for educators to track class performance trends, identify areas for improvement, and monitor student progress over time.
- Enable teachers to create customized learning experiences and interventions for students based on data-driven insights.

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METHODOLOGY

1. Data Collection and Preprocessing

2. Model Selection and Training

3. Model Testing and Validation

4. Integration and Deployment

5. Maintenance and Updates

DESCRIPTION ABOUT DATASET

The dataset contains information on student performance and various attributes that might influence it, with 480 entries detailing characteristics such as gender, nationality, place of birth, educational stage, grade, section, subject topic, semester, relationship of the survey respondent to the student, the number of times the student raised their hands, the number of resources visited, the number of times announcements were viewed, participation in discussions, whether the parent answered the survey, the parent's satisfaction with the college, and the number of absence days.

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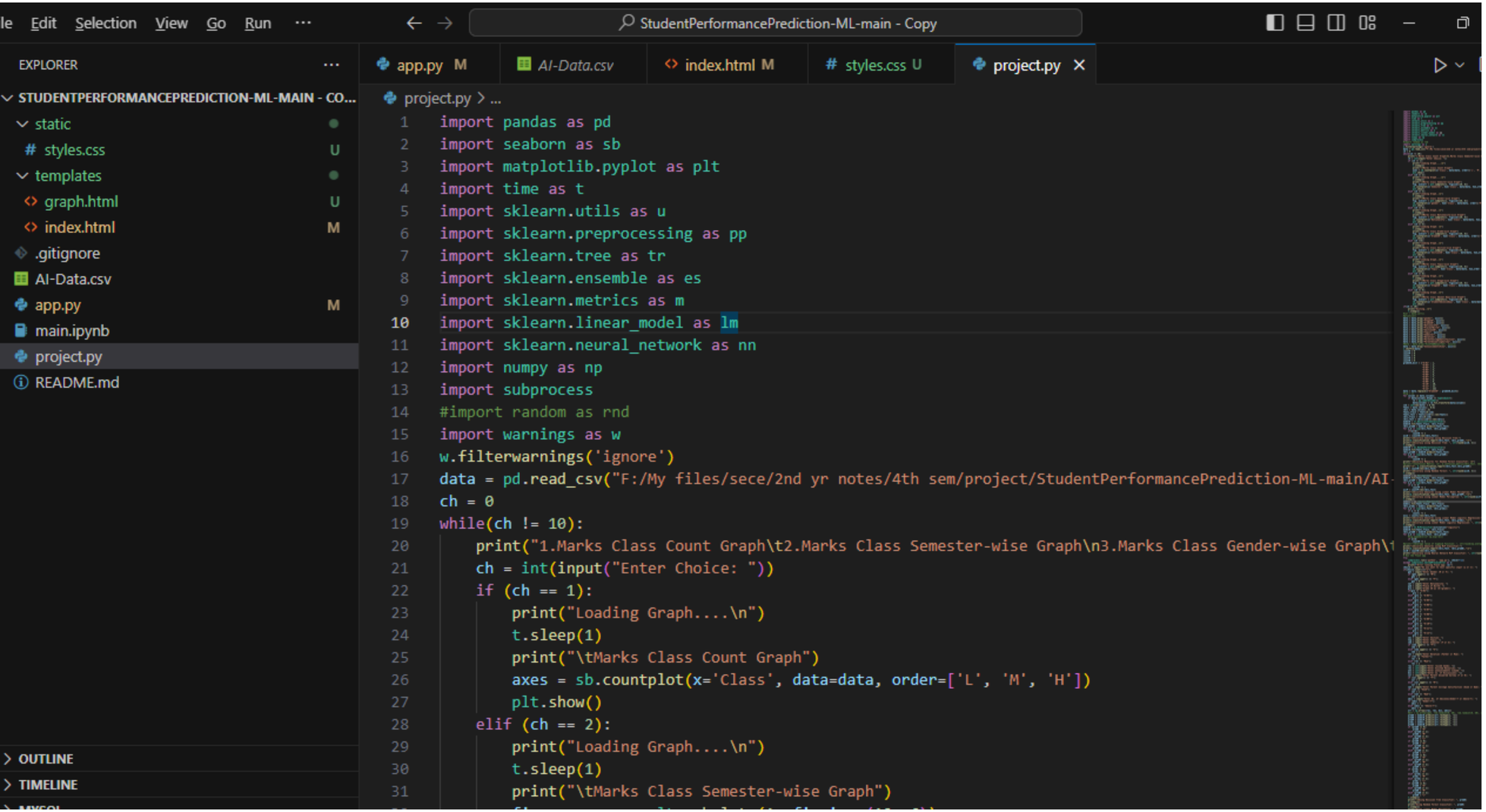
DATA TRAINING



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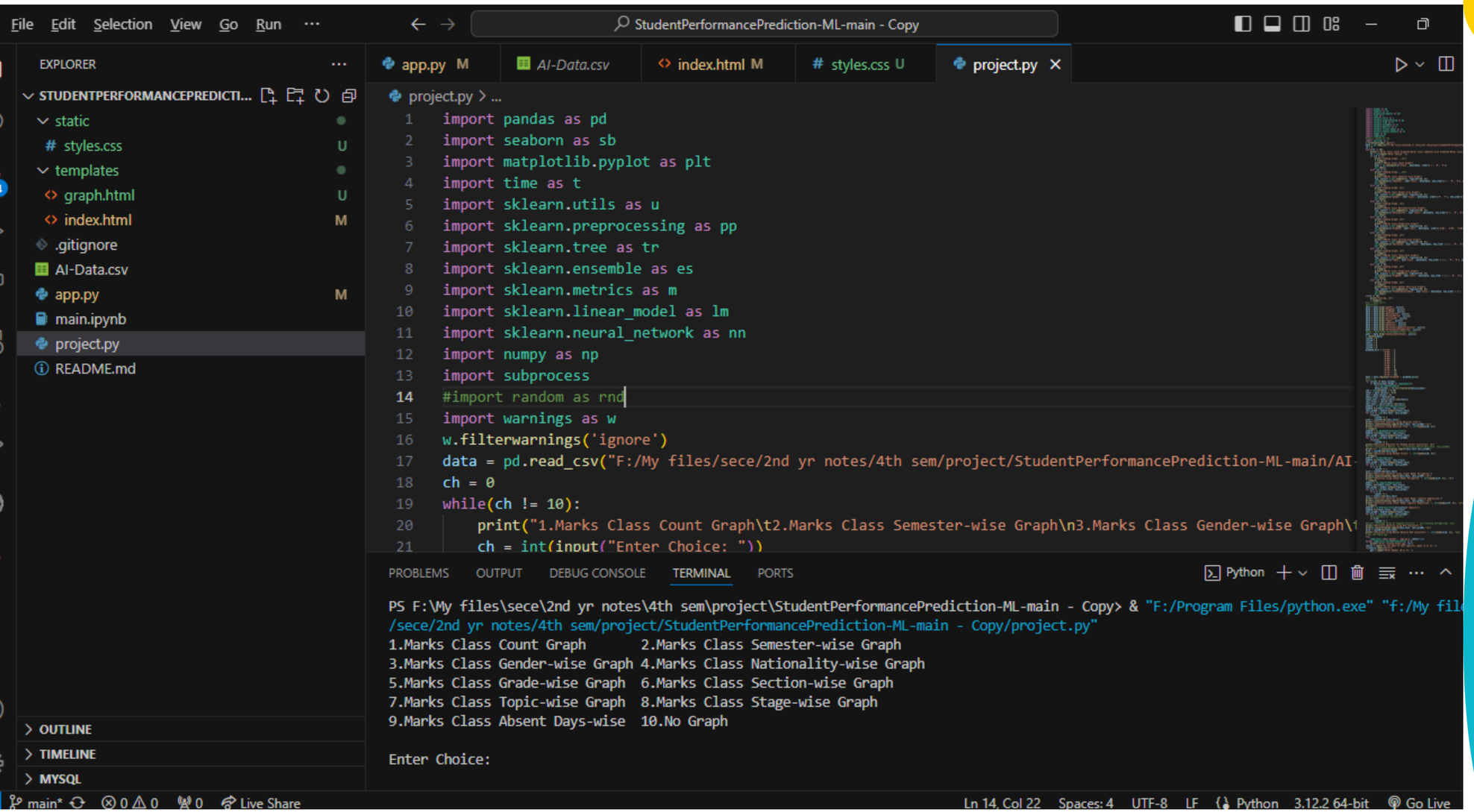
MODEL WORKING



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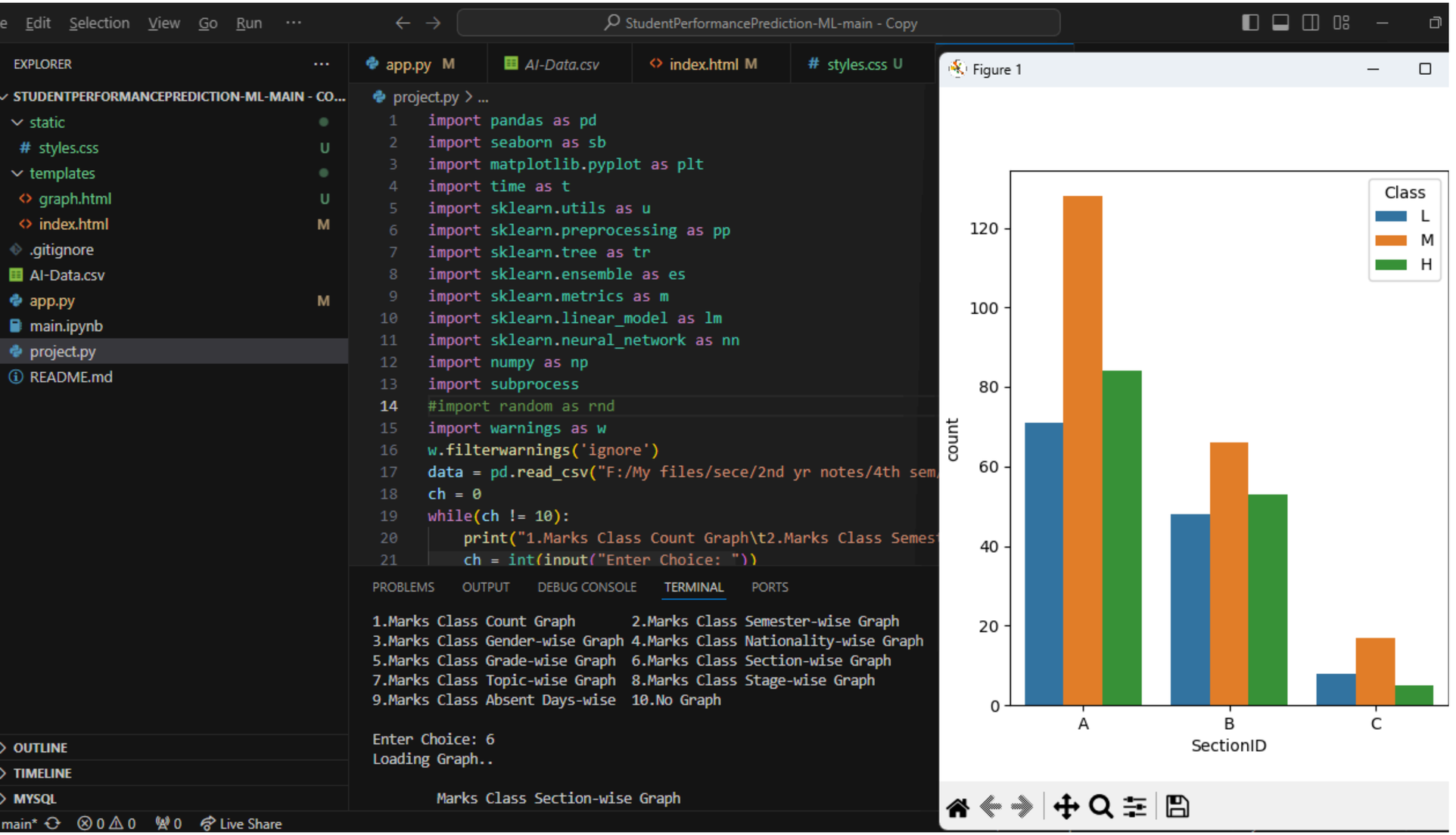
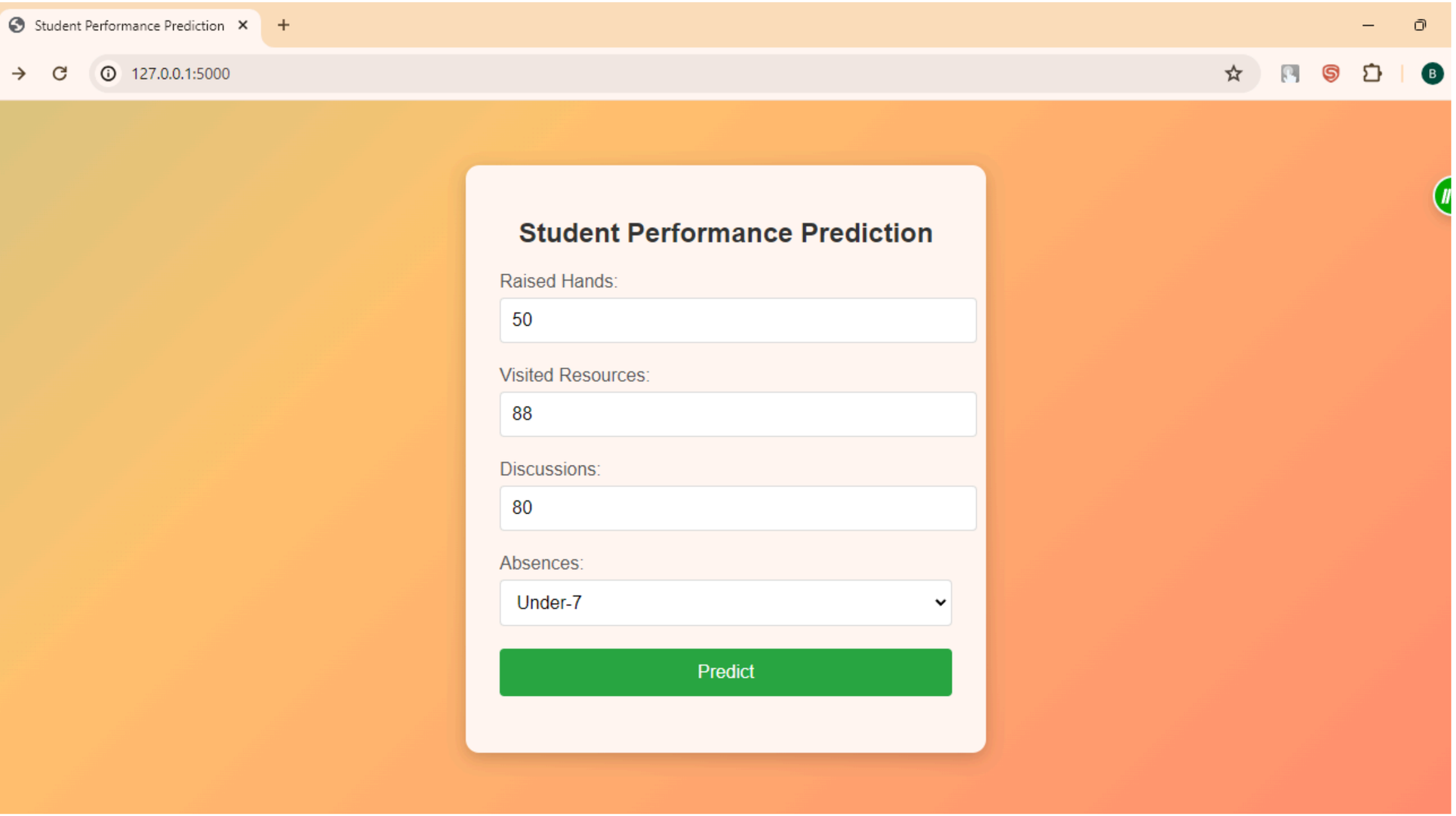


FUTURE WORKS



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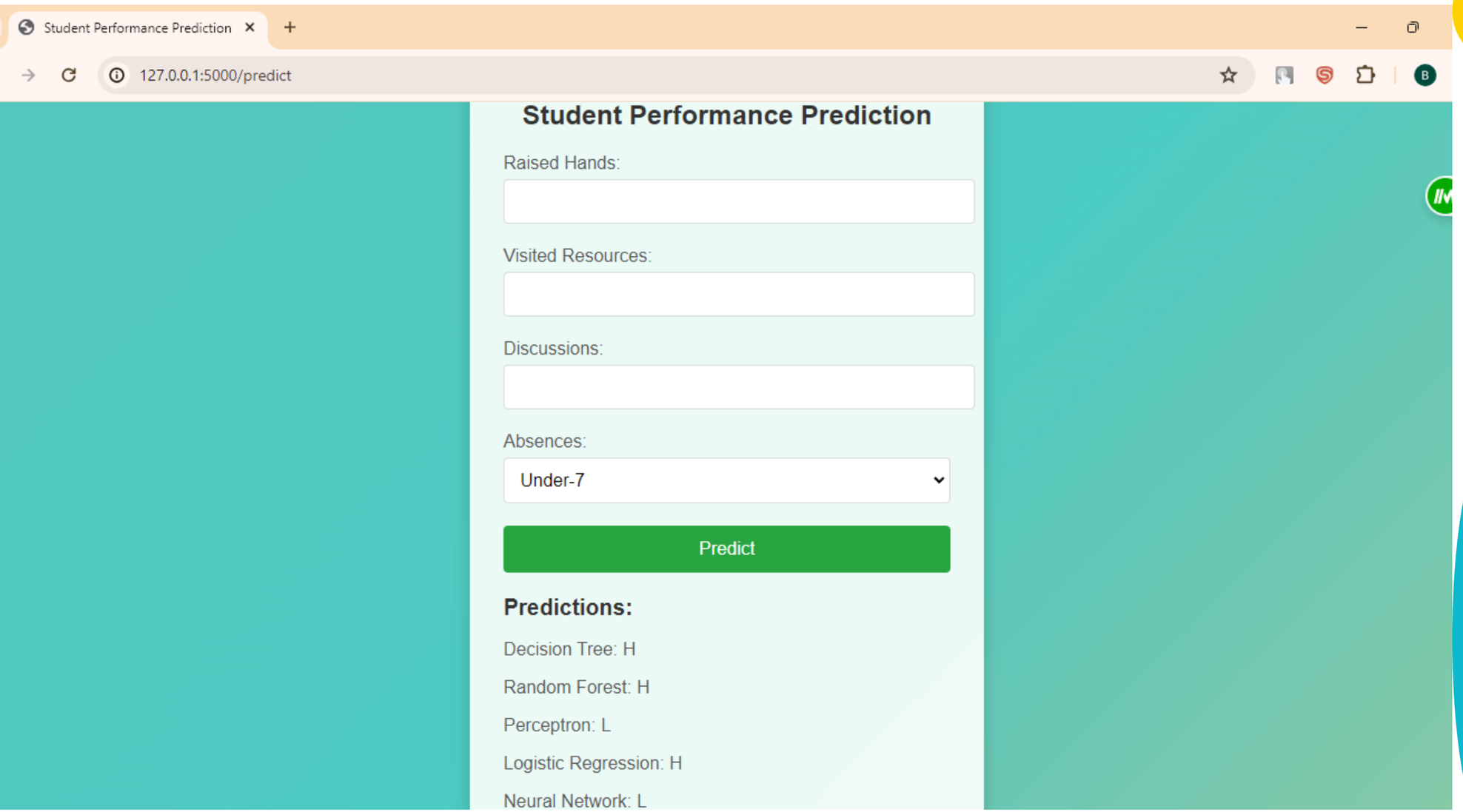

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WHAT WE LEARN THROUGH THIS

1. Data Basics of ML and DL

2. Model Interpretability

3. Future Directions

CONCLUSION

- This project explores the intricate relationship between various student attributes and academic performance. Through the analysis of a comprehensive dataset encompassing factors such as gender, nationality, educational stage, grade, and parental involvement, among others, valuable insights have been gained.

- It is evident that factors like parental satisfaction with the college, the number of resources visited, and the frequency of student engagement in discussions play significant roles in predicting student performance.

- Additionally, the diversity observed in student demographics highlights the need for personalized approaches in education to address individual needs effectively. By leveraging machine learning techniques, such as decision trees and logistic regression, accurate predictions of student performance can be made, empowering educators and stakeholders to implement targeted interventions and support systems to enhance student outcomes.

- Ultimately, this project underscores the importance of leveraging data-driven approaches in education to foster student success and facilitate continuous improvement in teaching and learning practices.

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