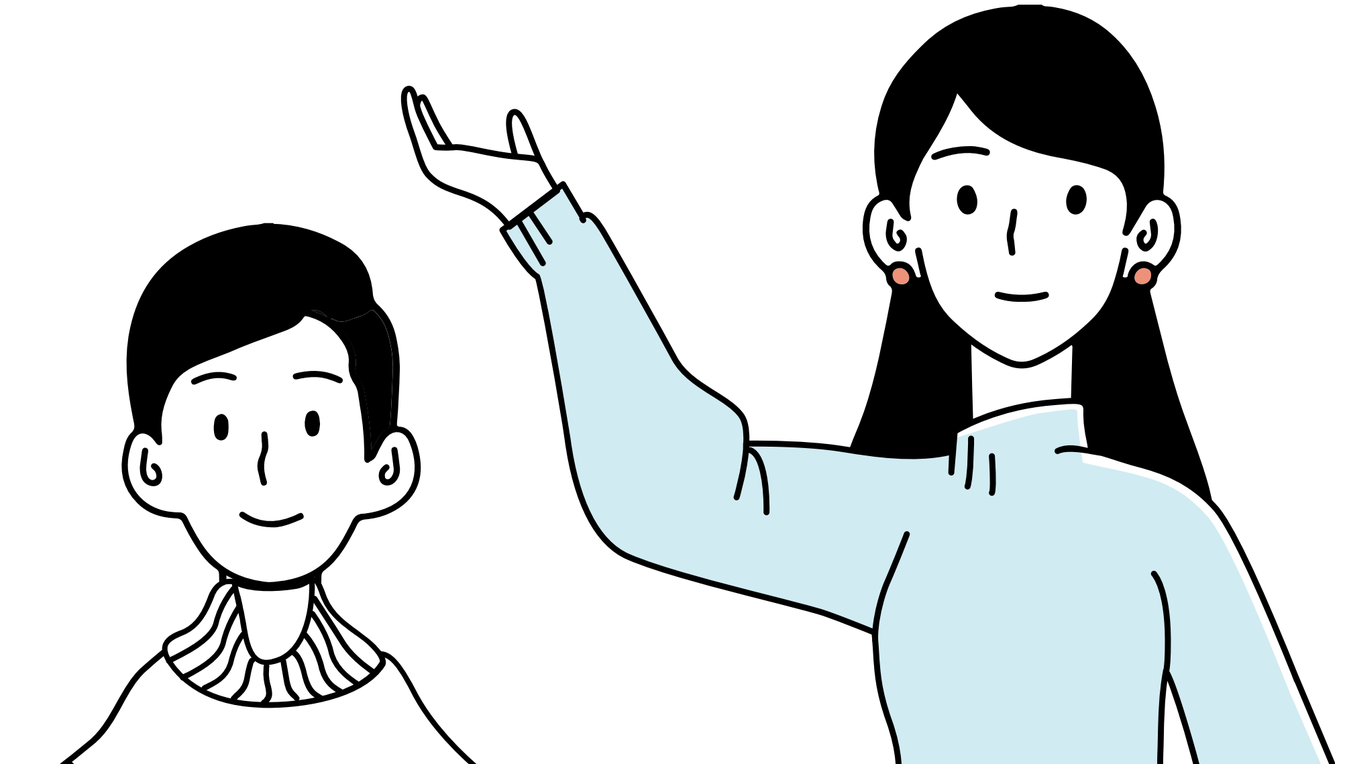
Machine Learning

06-18-2024

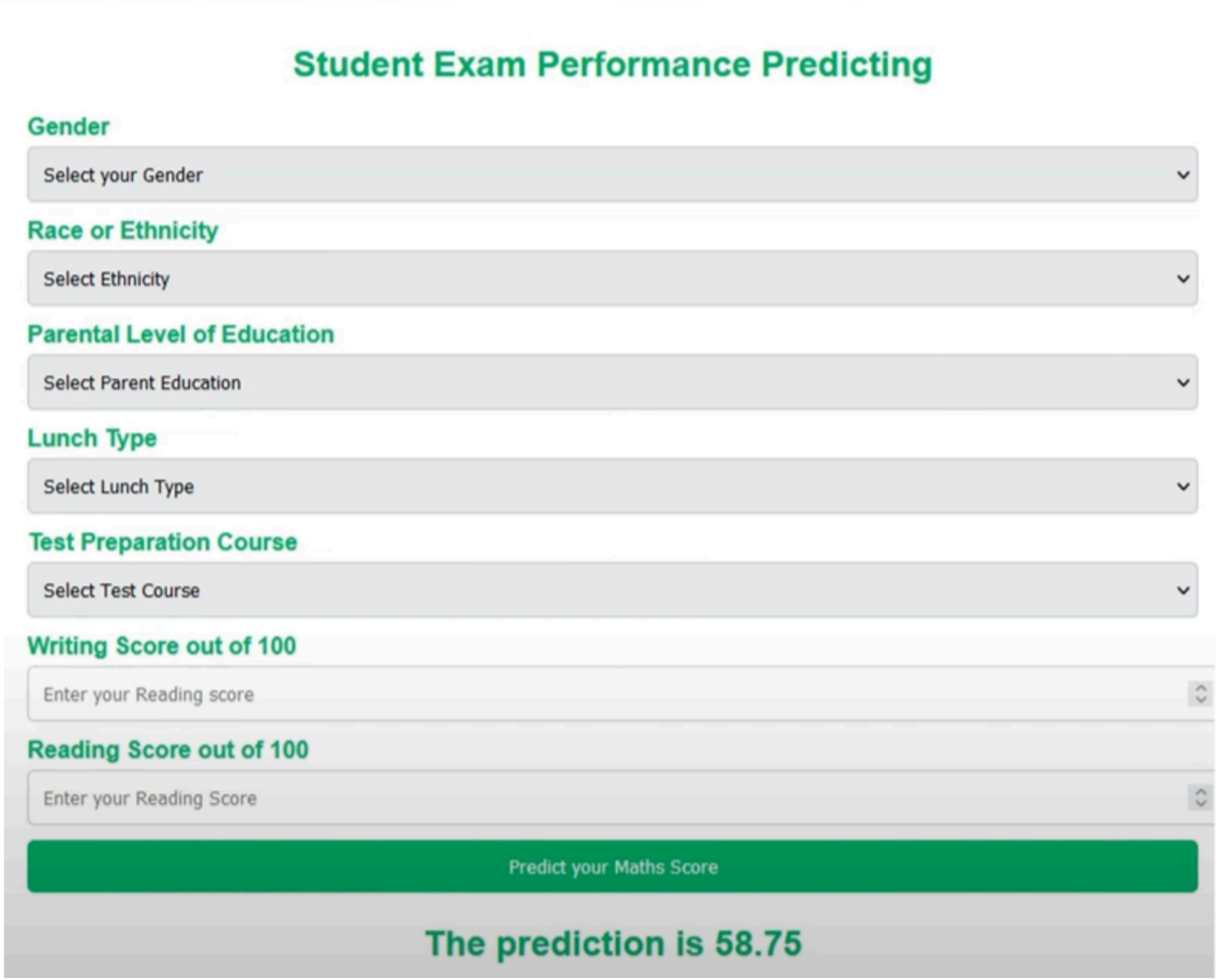
Predicting Student Performance



Introduction

This project aims to predict student performance based on various factors such as gender, ethnicity, parental level of education, lunch type, test preparation course, and exam scores.

We have trained a machine learning model using a dataset of student information and their corresponding exam scores. This model can provide insights into predicting a student's performance in mathematics.



Features

- Predicts student performance in mathematics based on multiple factors.
- Provides insights into the influence of gender, ethnicity, parental level of education, lunch type, and test preparation course on student performance.
- User-friendly interface for inputting student information and obtaining predictions.

Requirements

pandas
numpy
seaborn
matplotlib

scikit-learn
catboost
xgboost
Flask
dill

Dataset

The dataset used for training the machine learning model is sourced from Kaggle - Students Performance in Exams.

It contains information about students' demographics, parental education, lunch type, test preparation course, and their corresponding math scores.

Model Training

The machine learning model is trained using a supervised learning algorithm, such as a decision tree, to predict the math score based on the input features.

The dataset is split into training and testing sets to evaluate the model's performance

Results

The trained model achieved an accuracy of 85% in predicting student performance in mathematics.

The results demonstrate the significant impact of factors such as parental education, test preparation course, and lunch type on student scores.

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Thank you!