Student Score Prediction

Project: Student Posttest Score Prediction

Description:

This project predicts the posttest scores of students based on various factors such as school setting, teaching method, pretest scores, and more. The model is trained using a machine learning algorithm, and a Streamlit application is developed for user interaction.

Features used:

1. School Setting: Urban, Suburban, or Rural
2. School Type: Public or Non-Public
3. Teaching Method: Standard or Experimental
4. Gender: Male or Female
5. Lunch: Free/Reduced or Standard
6. Number of Students in Class
7. Pretest Score

Technology Stack:

1. Python (Numpy, Scikit-learn, Pickle)
2. Streamlit (for building the user interface)
3. Machine Learning (Random Forest model used)

Steps:

1. Data Preprocessing:

- Data is cleaned and preprocessed. Categorical features are converted to numerical values for machine learning.

2. Model Training:

- A Random Forest regression model is trained to predict the posttest score based on input features.

3. Building the Streamlit Application:

- The app allows users to input features and predicts the posttest score using the trained model.

4. Deployment:

- The model can be deployed as a web app using Streamlit. Simply run the app using the command:

streamlit run main_app.py

How to Run:

1. Install dependencies:

pip install streamlit numpy scikit-learn

2. Run the application:

streamlit run main_app.py

The app will open in your web browser and allow you to input student information to get predictions for posttest scores.