Project Report CSCE-478 S25

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Uber Ride Price Prediction

The problem being addressed

The goal of this project is to predict the price of Uber rides based on a variety of input features, such as distance, cab type, source, and destination.

The models used

We use linear regression and

The performance indicators compared and a justification for the best model

Linear Regression Output:

A black screen with white text

AI-generated content may be incorrect.

Pros and cons of the approach

The main advantage of using linear regression is its simplicity and speed. Initially, we attempted to use the Support Vector Regression model to process the dataset. However, due to its computational complexity and the large volume of data, the SVR model failed to produce results within a reasonable timeframe. As a result, we switched to linear regression for its efficiency.  
While linear regression is able to generate results quickly, it comes with certain limitations. It is sensitive to outliers, which can significantly impact the accuracy of predictions. Additionally, linear regression assumes a linear relationship between features and the target variable, making it ineffective at capturing more complex, non-linear patterns in the data.