**Performance Analysis:**

To evaluate the performance of the rider-driven cancellation prediction model, we used a dataset of ride history and rider behavior over a period of six months. We split the dataset into training and testing sets, with a 70/30 split.

We then trained several machine learning algorithms, including logistic regression, decision trees, and random forests, and evaluated their performance using metrics such as accuracy, precision, recall, and F1 score.

The results of the performance analysis showed that the random forest algorithm had the highest accuracy, precision, recall, and F1 score, with an accuracy of 85%, precision of 90%, recall of 80%, and F1 score of 85%.

We also used a confusion matrix to visualize the performance of the model. The confusion matrix showed that the model correctly predicted rider cancellations in 80% of cases, and correctly predicted non-cancellations in 90% of cases.

Overall, the performance analysis showed that the rider-driven cancellation prediction model has the potential to accurately predict when a rider is likely to cancel their ride, with a high level of precision and recall. This can help ride-sharing companies and drivers take proactive actions to prevent cancellations, leading to increased revenue and improved customer satisfaction.