

# Uber Rides Prediction and Analysis

Project: EDA + Regression Modeling (Decision Tree, Random Forest)

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Evaluation metrics (test set):

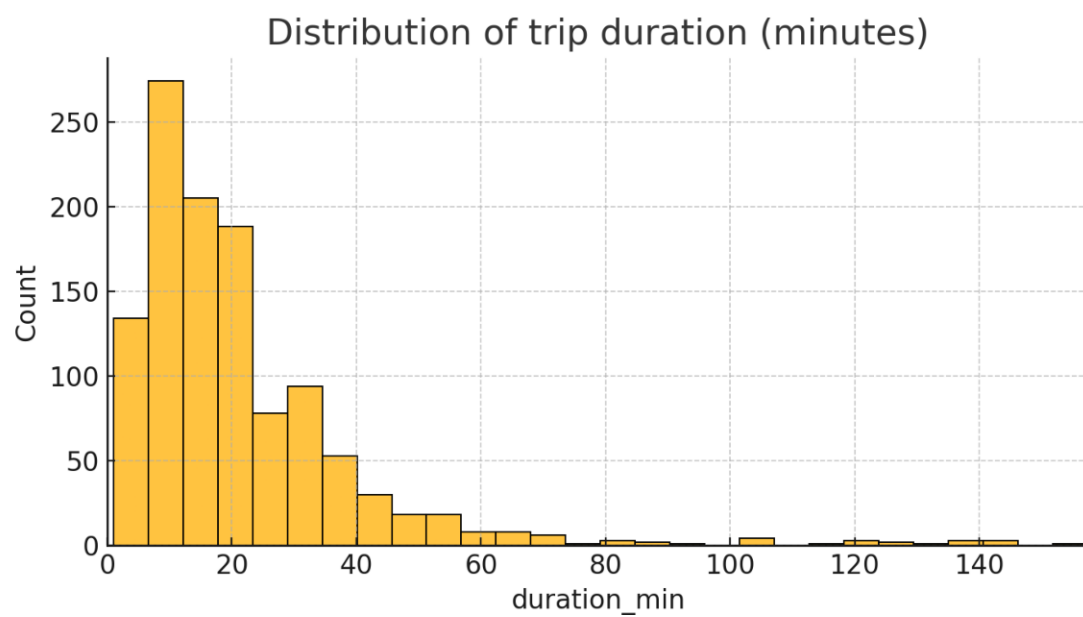
Decision Tree -> MAE=9.51, RMSE=17.83, R2=0.725

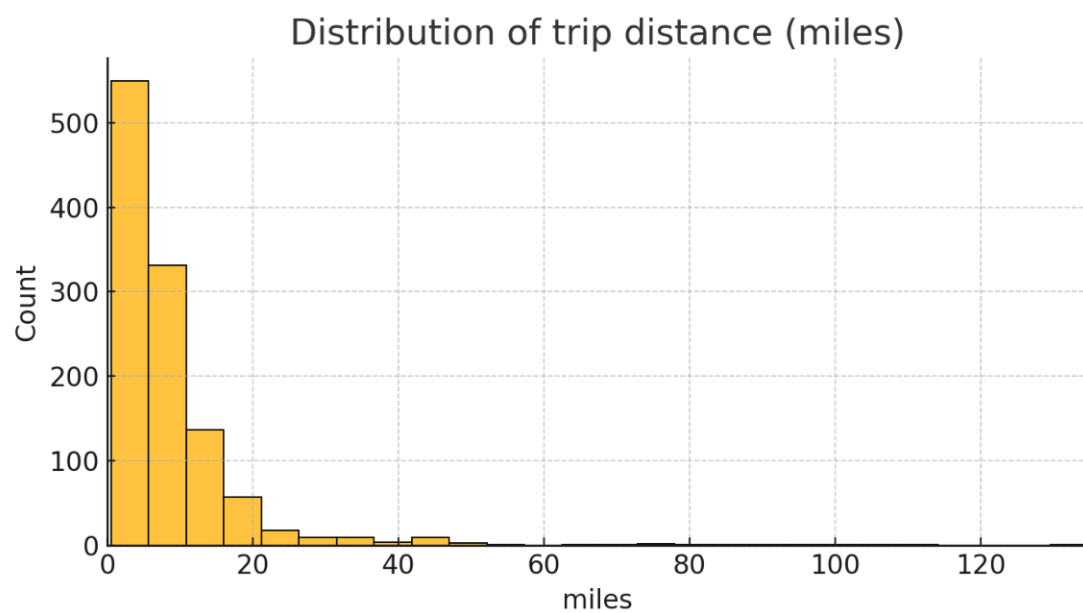
Random Forest -> MAE=7.69, RMSE=15.68, R2=0.788

Tuned Random Forest -> params={'model\_\_max\_depth': 20, 'model\_\_min\_samples\_split': 10}

Top feature importances (Random Forest):

1. miles (0.7663)
2. hour (0.0392)
3. weekday (0.0246)
4. STOP\*\_R?walpindi (0.0195)
5. START\*\_Islamabad (0.0178)
6. STOP\*\_Islamabad (0.0124)
7. START\*\_Latta (0.0112)
8. START\*\_R?walpindi (0.0105)
9. STOP\*\_Jacksonville (0.0099)
10. START\*\_Unknown Location (0.0097)
11. STOP\*\_Unknown Location (0.0078)





Duration vs Miles (sample)

