

**TAXI TRAVEL TIME PREDICTION USING
META LEARNING**

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Abstract

In the development of mobility-on-demand systems and traveler information systems, the ability to predict travel times is critical. Riders and drivers who use such systems benefit from accurate travel time estimation as it aids in the decision-making processes.

In this research paper, a meta learning model is introduced to predict the static travel time of trip trajectories using Catboost and XGBoost as base models and Linear Regression as the meta learner to efficiently learn from the predictions of the base models and provide an accurate travel time prediction. The Meta-predictor model is evaluated and compared with many regression models where the model performs impressively. The prediction values of the model have reduced the Mean Absolute Error (MAE) and Root Mean Squared Error (RMSE) while improving the correlation when compared to actual travel time of trips.

The author of the research demonstrates that the accuracy of static travel time prediction could be improved by combining better performing regression models with a Meta learner which helps to minimize the errors of prediction values compared to the actual trip travel time when applied to large scale data.

Keywords – Travel Time Prediction, Meta Learning, Catboost Regression, XGBoost Regression, Linear Regression