



TEAM 14

UBER CAR FARE PREDICTION

Guided by Baishalini Sahu

About Project

Abstract

"In this project, we employ AI and ML to accurately predict Uber car fares based on dynamic factors. Our aim is to develop a model for transparent fare estimation, enhancing user experience and operational efficiency within Uber. Through this effort, we contribute to advancing AI-driven transportation solutions and empowering users with informed decision-making."



Objective

The core challenge is predicting Uber car fares accurately, a task influenced by diverse factors such as distance, time, and location.



SCOPE

Building best prediction model with car fare data analysis and prediction of future prices.

CLIENT

Uber

SOLUTION APPROACH

Machine Learning and Deep Learning Algorithms

DATA SOURCE

The dataset is obtained from kaggle, it consists of record organized into 10 columns, each representing a specific aspect of car and ride information.



DATA VISUALIZATIONS

Power BI, Matplotlib

AUTO EDA

Pandas Profiling

CROSS VALIDATION

K - fold



TECHNOLOGY STACK

TECHNOLOGY

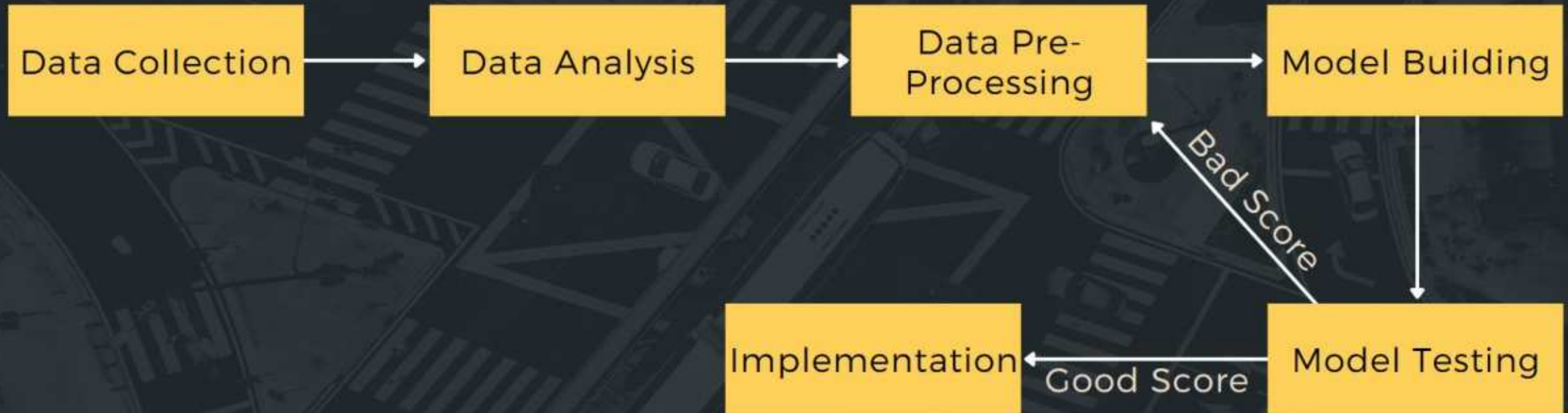
MACHINE LEARNING
PYTHON
HTML
CSS
JAVA SCRIPT

SOFTWARE

JUPYTER NOTEBOOK
VS CODE
POWER BI
GOOGLE COLAB



Flow Chart



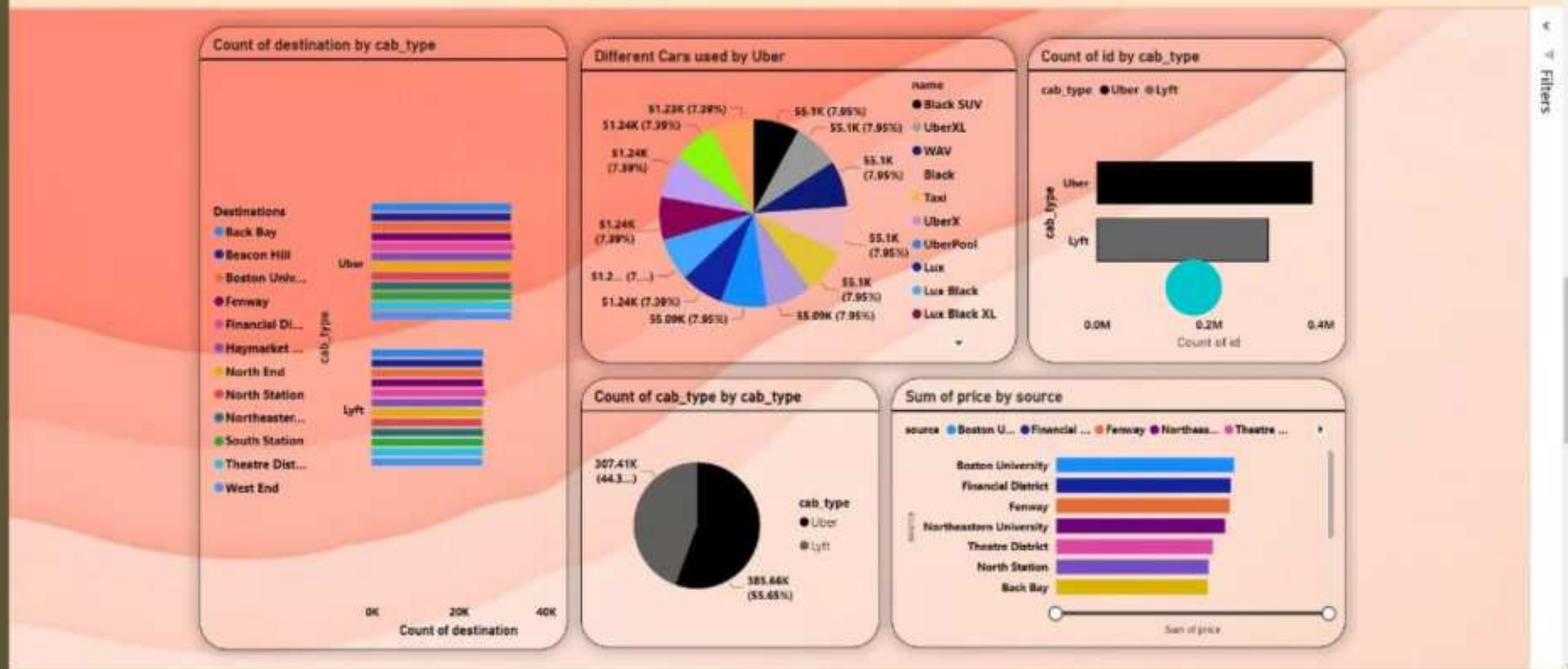
Algorithms Used

1. GRADIENT BOOST
2. ANN
3. DECISION TREE
4. XGB
5. KNN
6. LASSO
7. LINEAR REGRESSION
8. SVM
9. RANDOM FOREST



Analytics

Analytics and Visualization



Web Page



Prediction

Distance:

Select Source Location:

Select Destination Location:

Product ID:

Select Car:

Submit

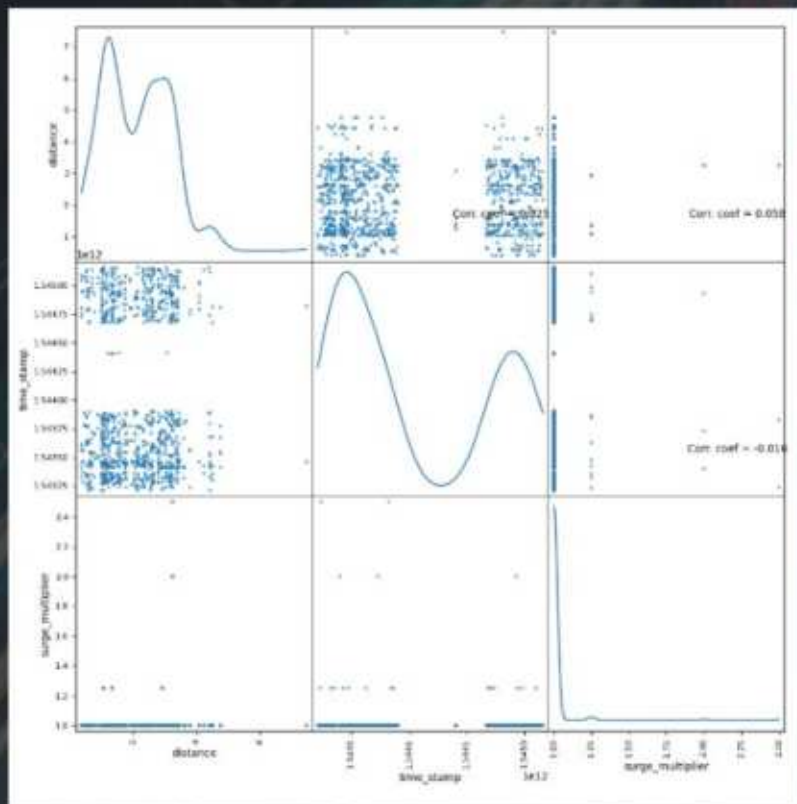
Prediction:

Analytics and Visualization

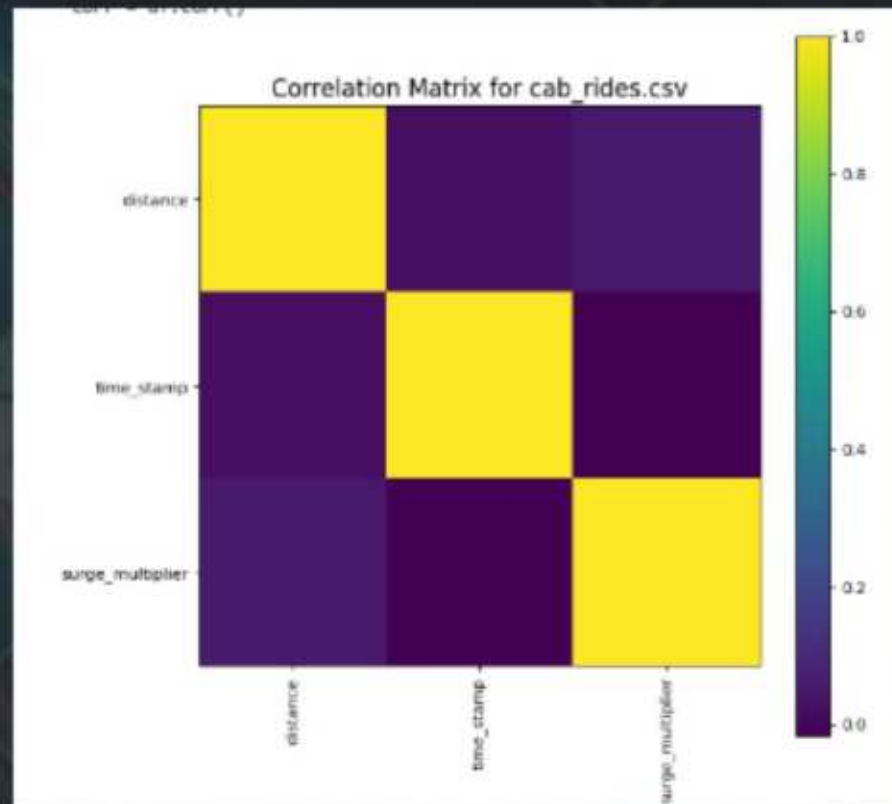


Data Visualization

Scatter and density plots



Correlation matrix





S.No	Algorithm	Mean Squared Error	R square value
1	Linear Regression	5.7320	0.9208
2	Decision Tree	3.5264	0.9513
3	Random Forest	3.4754	0.9522
4	Support Vector Machine	4.5374	0.9212
5	K-Nearest Neighbour	3.6057	0.9502
6	XGB	3.4283	0.9526
7	Lasso Regression	29.3660	0.5943
8	Gradient Boost	3.7367	0.9484
9	ANN	3.8220	0.9474

Benefits

What We'll Offer



Transparency



Cost Savings



Predictability



Efficiency



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The background of the slide is an aerial photograph of a city street grid. The image is color-coded with a yellow-green tint in the center and dark blue-grey tones towards the edges. The text is overlaid on this background.

THANK YOU

Let's Talk
We're open for questions and
comments.