TAXI FARE PREDICTION

SUBMITTED BY

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Course Title - Project Submission

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TABLE OF CONTENTS

ABSTRACT

The Taxi Fare Prediction project leverages machine learning techniques to accurately predict taxi fares based on various features such as distance, traffic conditions, weather severity, and time of day. Using ensemble models, this project demonstrates the potential of combining multiple regressors to improve predictive performance. The developed system aims to aid taxi operators and customers by providing an efficient and transparent fare estimation tool.

1. INTRODUCTION

Accurate prediction of taxi fares is a critical component of modern transportation systems. With the increasing demand for transparent and efficient fare estimation, this project explores the application of machine learning models, including XGBoost and Random Forest, in predicting taxi fares. The stacking regressor used combines these models for enhanced prediction accuracy.

2. SYSTEM REQUIREMENTS

Hardware Requirements:

- Modern multi-core processor (e.g., Intel i5 or higher)

- Minimum 8 GB RAM (16 GB recommended)

- GPU with CUDA support for training speed-up (optional)

- 10 GB of free disk space

Software Requirements:

- Operating System: Windows, macOS, or Linux

- Python 3.8 or higher

- Libraries: Scikit-learn, XGBoost, Matplotlib, Seaborn, Pandas, NumPy