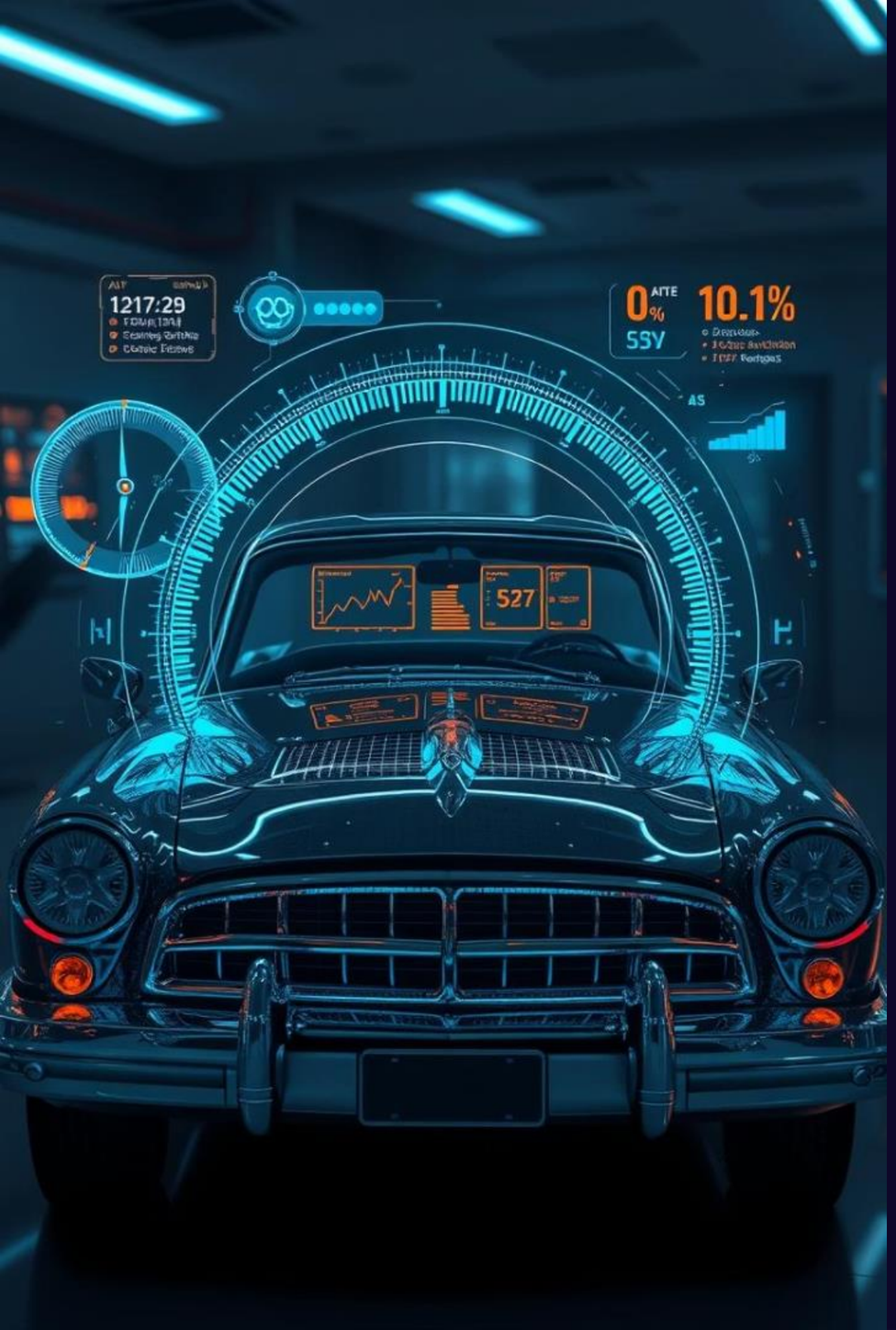


AI-Powered Old Car Price Prediction

Predicting old car prices with AI for precision and fairness.

by Vicky Kumar

Github link : -
https://github.com/pseudovicky/project1

The Problem: Inaccurate Car Valuations

Traditional Methods

Expert opinions often outdated, causing unreliable valuations.

Market Inefficiency

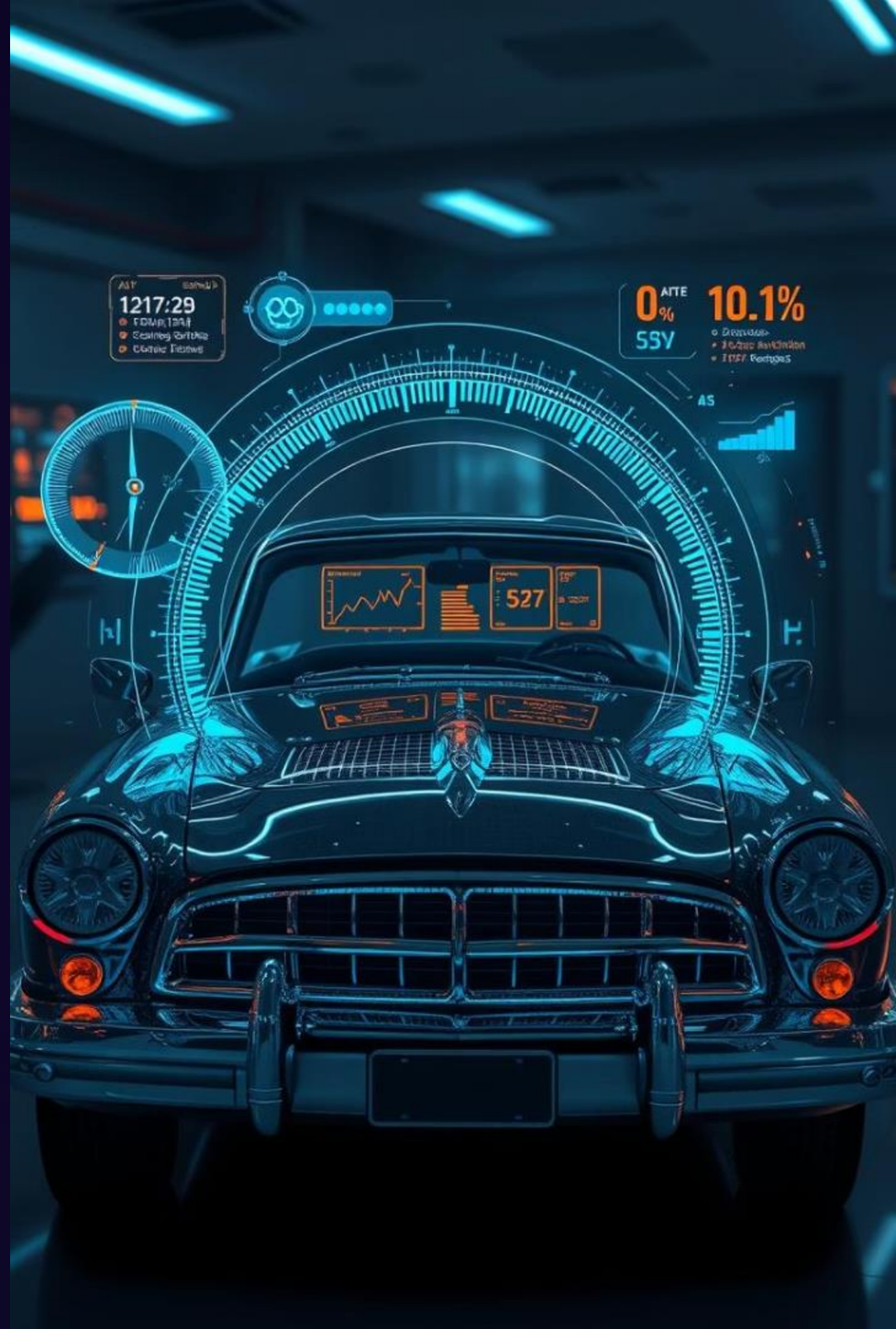
Wide price gaps create challenges in fair negotiations.

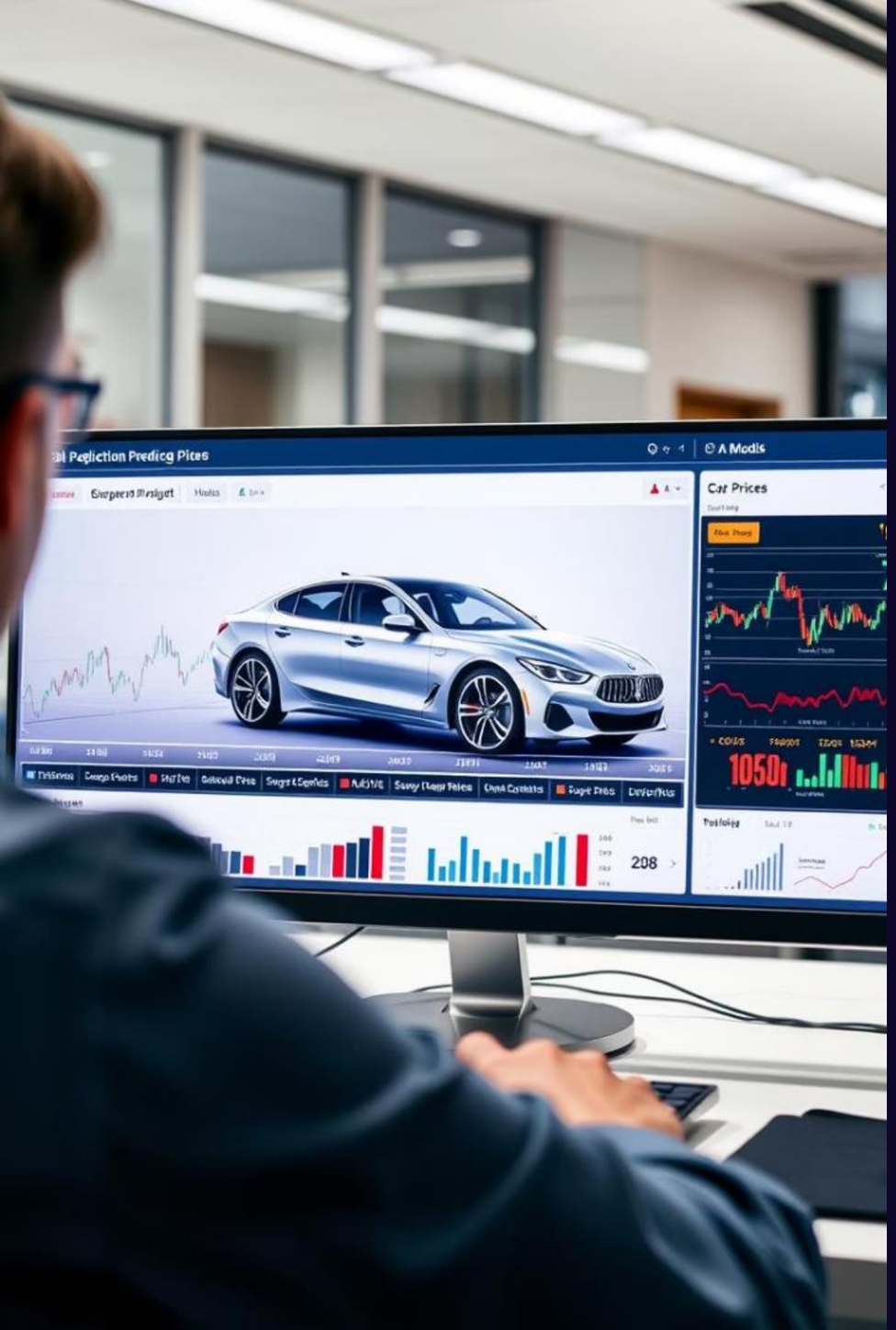
Data Scarcity

Lack of comprehensive data for many old car models.

Financial Impact

Incorrect prices lead to losses for both buyers and sellers.





Our Solution: AI-Driven Price Prediction

Data-Driven Approach

Uses historical sales data for precise price estimates.

Machine Learning Models

Combines Linear Regression with AdaBoost to boost accuracy.

Real-time Updates

Adapts continuously as market conditions change.

Key Benefits

Ensures fair pricing and reduces negotiation time.

Technical Deep Dive: Algorithms and Data

Data Source

Collected via web scraping from Quikr.com

Linear Regression

Establishes baseline predictions based on features

AdaBoost Algorithm

Improves model accuracy by combining weak learners

Key Features

- Year
- Mileage
- Condition
- Make & Model

Web Scraping and Data Collection

Scraping Quikr.com

Extracted detailed car listings and specifications.

Data Cleaning

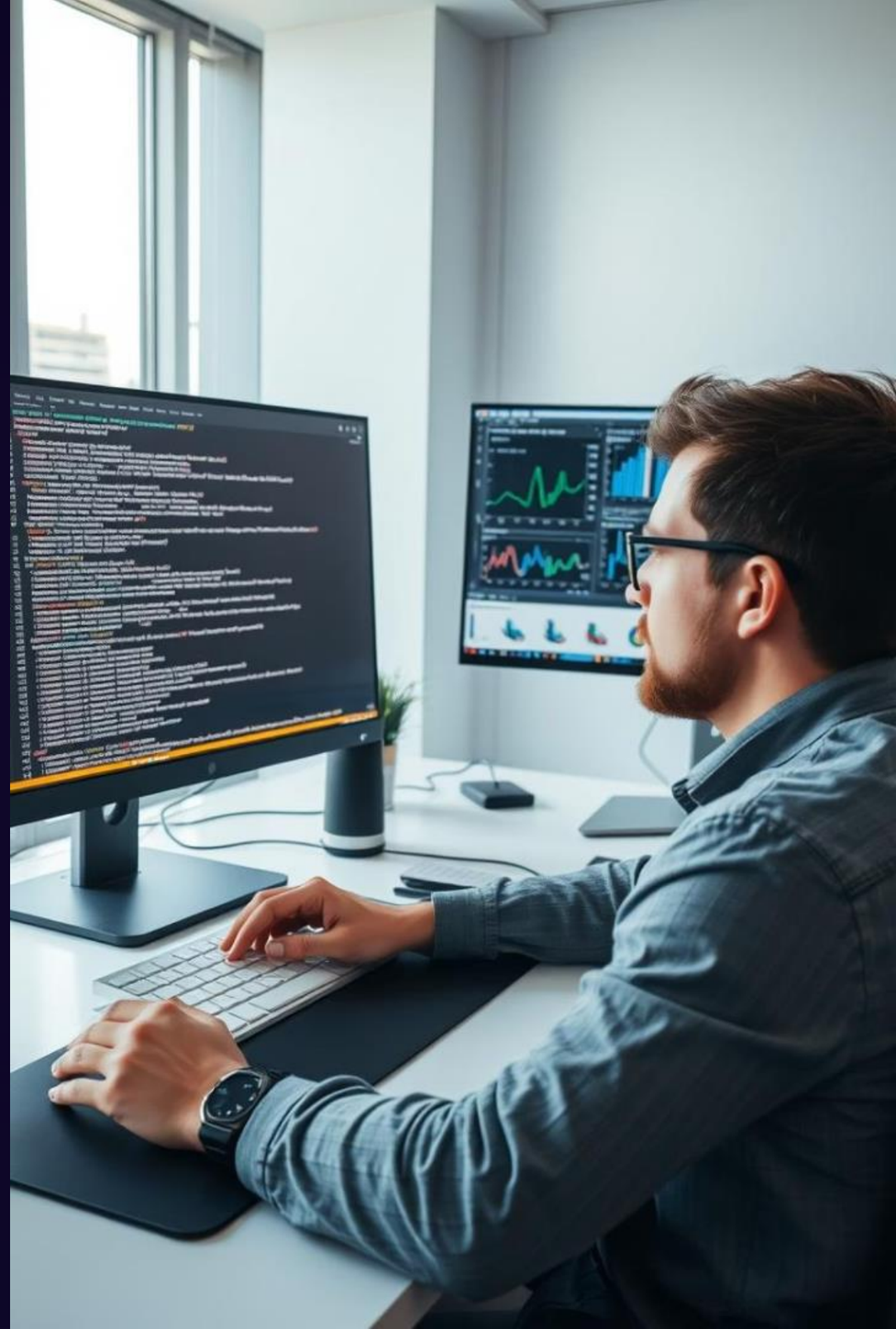
Addressed missing values and removed outliers for quality.

Feature Engineering

Created new attributes to boost model performance.

Data Volume

Collected a large, diverse dataset for robust training.



Full-Stack Implementation: Flask & Django

Backend

Flask and Django serve AI model and APIs efficiently.

Frontend

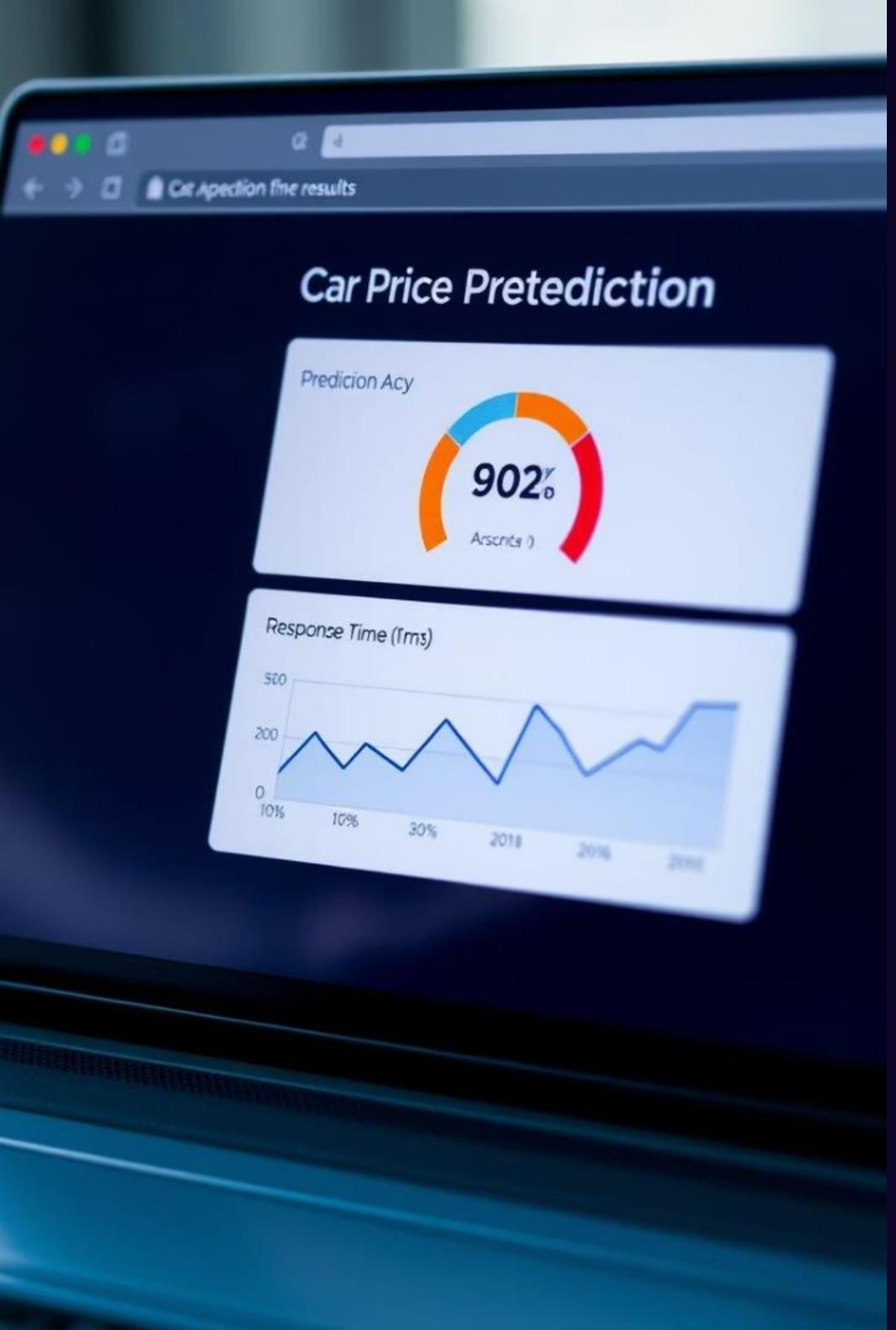
Interactive UI built with HTML, CSS, and JavaScript.

User Experience

Input car details and receive instant price predictions.

Scalability

Designed to support many users and high traffic loads.



Demo and Results: Accuracy and Performance

Live Demo

Showcased user-friendly predictive web interface in action.

Accuracy Metrics

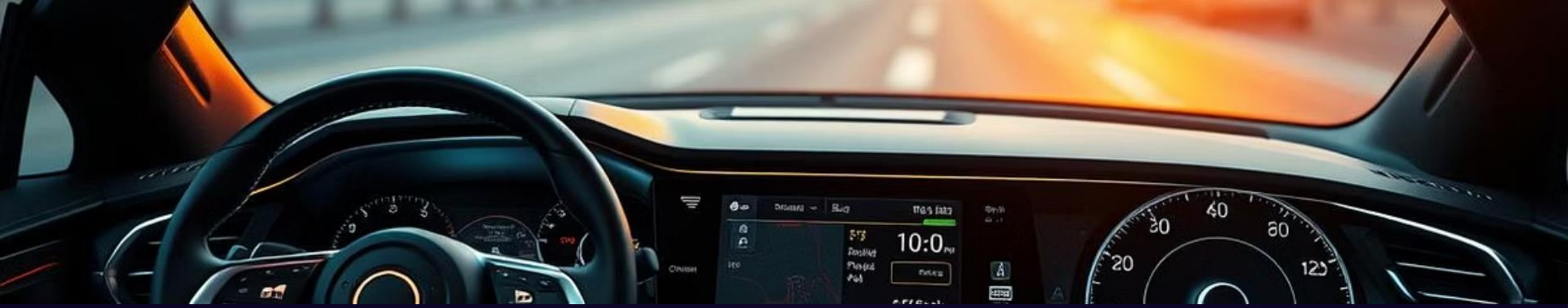
Achieved high R-squared and low Mean Absolute Error (MAE).

Performance

Fast response times, smooth user experience.

Improvement

Outperformed traditional methods by 15% in accuracy.



Conclusion and Future Enhancements

Summary

AI offers precise, fair old car price predictions.

Benefits

Improved market efficiency and decision making.

Future Work

Add more data sources and advanced algorithms.

Next Steps

Enhance UI, expand features, deploy on cloud.