**ABSTRACT**

**Ownership Cost Forecasting for Pre-Owned Cars**

This project aims to develop a forecasting model to predict the total ownership cost of pre-owned cars over a specified period.

Utilising historical data on used car sales, maintenance records, and depreciation trends, we employ Python-based data analysis and machine learning techniques within the Google Colab environment.

A Linear Regression model is implemented within an end-to-end workflow, achieving performance metrics (RMSE and R²) for price prediction.

Visualizations, including scatter plots, box plots, and time-series charts, reveal key price determinants such as mileage, brand, and manufacturing year.

The pipeline demonstrates a foundational ML approach for regression tasks in automotive valuation contexts.