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Car Resale Value Prediction

Anjana Devi¹, Ajaysivan², Gnanendra Prasad³, Aravind Nandha B⁴, Dravid Kumar⁵,
Alfred Samstephen⁶.

U.G. Student, Department of Electronics and Communication Engineering, Adhiyamaan College of Engineering,
Krishnagiri, Tamil Nadu, India¹

Associate Professor, Department of Electronics and Communication Engineering, Adhiyamaan College of Engineering,
Krishnagiri, Tamil Nadu, India²

ABSTRACT: This is the main for building a system that can predict the resale value car resale value prediction the car based on features like km driven, year of purchase, etc. without manual or human interference. The used car resale market in India was 20 billion USD in 2020. Due to the huge requirement for used cars and the lack of experts who can determine the correct valuation, there is almost a need of bridging this gap between sellers and buyers.

KEYWORDS: RMSE, multi-linear regression, random forest regression, and support vector machine.

I. INTRODUCTION

This project is going to predict the used car's resale value. Determining the listed price of a used car is a challenging task. In the project, we have used different algorithms with different techniques for developing Car resale value in the prediction prediction systems considering different features of the car. In aar24.com, car resale value prediction helps the user to predict the car's resale value depending upon various features like kilometers driven, fuel type, etc.

II. NEED FOR SYSTEM

This resale value prediction system is made for general purposes just to predict the amount that can be roughly acquired by the user. We try to predict the amount of resale with 80% accuracy so the user can get an estimated value before he resales the car and doesn't make a deal in the loss.

PROJECT PURPOSE

The main idea of making a car resale value prediction system is to get hands-on practice with python using Data Science. The main idea of making a car resale value prediction system is to get hands-on practice. In a nutshell, car resale value prediction helps the user to predict the resale value of the car depending upon various features like kilometers driven, fuel type, etc the actual price of a car rather than the price range of a car is the system to predict the amount of resale value based on the parameters provided by the user.

OBJECTIVE

A car resale value prediction system is made to predict the correct valuation of used cars that helps users to sell the car remotely with perfect valuation and without human intervention in the process to eliminate biased valuation user to predict the resale value of the car depending upon various features like kilometers driven, fuel type, etc the actual price of a car rather than the price correct valuation of used cars that helps users to sell the car remotely with perfect valuation and without any error and corrections.

Algorithms implemented	
Model Algorithm	RMSE
Support Vector Regression	57000
Random Forest Regression	66000
Decision Tree Regression	76000

Table.1: Analysis of prediction

III. PREDICTION APPROACH

The dataset of resale cars of Swift Desire in 10 cities is gathered via web scraping cars24 website. This dataset contains data of 5 main features i.e., fuel type, km driven, city, of many unwanted characters like comma, whitespaces, etc. which has to be removed as the model can only understand numbers. Moreover, fuel type was converted into numerical codes via one-hot encoding. A one-hot encoding is a representation of categorical variables as binary vectors. This requires that the categorical values be mapped to integer values. After data pre-processing, and also we use algorithms like random forest regression and multi-linear regression The algorithm automatically generates a mask image without user interaction that contains only text regions to be in paint.

IV. TECHNICAL ARCHITECTURE

This technical architecture will be explained pre-processing of the dataset that is collected-processing includes: Handling the null values. Handling the categorical values if any. Normalize the data if required. Identify the dependent and independent variables. Split the dataset into train and test sets. Sample paragraph Define abbreviations and acronyms the first time they are used in the text, even after they have been defined in the abstract. Abbreviations such as IEEE, SI, MKS, CGS, sc, dc, and rms do not have to be defined. Do not use abbreviations in the title or heads unless they are unavoidable. After the text edit has been completed, the paper is ready for the template. Duplicate the template file by using the Save As command, and use the naming convention prescribed by your conference for the name of your paper. In this newly created file, highlight all of the contents and import your prepared text file. You are now ready to style your paper

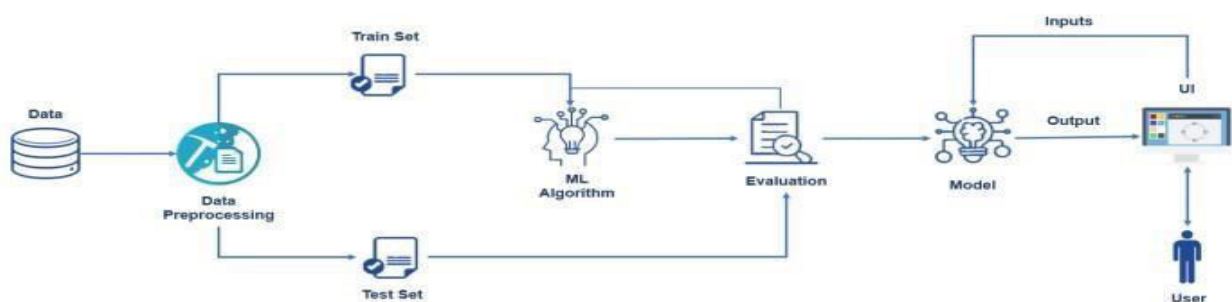


Fig .1: Technical Architecture

V. ALGORITHM

RANDOM FOREST:A random forest regressor. A random forest is a meta-estimator that fits a number of classifying decision trees on various sub-samples of the dataset and uses averaging to improve the predictive accuracy and control over-fitting. The algorithm we use in our project is random forest regression. A random forest regressor. A random forest is Since a random forest combines multiple decision trees, it becomes more difficult to interpret. Random ng is an incredible variety. Random Forest is an ensemble technique capable of performing both

regression and classification tasks with the use of multiple. Normally, random forests or random decision forests are used for classification, regression, and other tasks where they construct a multitude of decision trees at training time and output the class that is the mode of the classes (classification) or mean/average prediction (regression) of the individual trees of, the random forest Regressor was trained with the intercept property. Score, MSE, RMSE, and MAE errors are used to evaluate the model.

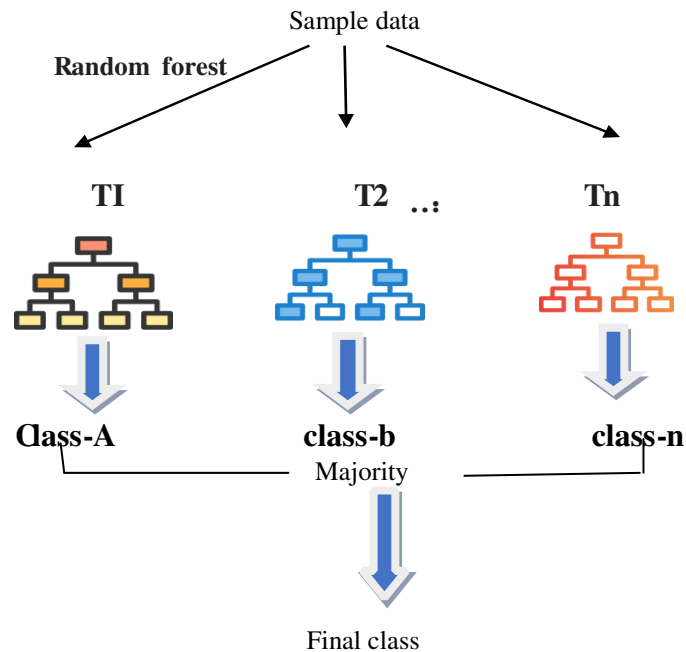


Fig.2:Random forest simplified model

Individual decision trees it can run successfully and test the application of 87 percent and the application is the best prediction of resale car value.

- i. **Test cases:**The data collected from the cloud is given by IBM and also collected from cars24.com. create a dashboard, report, and story. Embed the dashboard, report, and story to a simple HTML. Create a web app and embed the dashboard, report, and story which you have created.
- ii. **Exploratory result:** The user values are taken from the HTML page in the flask application. These factors are then given to the model to know the resale value of a car the parameter values from the UI and return the prediction. And it can run successfully and test the application of 87 percent and the application is the best prediction of resale car value.

VI. FUTURE ENHANCEMENT

In the future System can only deal with Swift Dire cars due to a lack of data. This can be extended to multiple car models and cities to improve accuracy and usability. Efficient use of in-car resale value prediction and this system develop further and continuously.

VII. CONCLUSIONS

I have no other words to express my sincere thanks to the faculties of Adiyamaan college of engineering, Hosur for their kind cooperation and able guidance. Especially to Mrs. Anjana devi R., M.E. my project guide in college without whom the project could not be executed.

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BIOGRAPHY



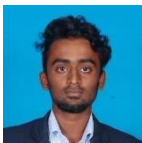
Mrs. Anajana devi., M.E.,
Assistant professor
Electronics and Communication Engineering
Adhiyamaan college of engineering,
Anna university



Ajaysivan.S
Bachelor of Engineering (Student)
Adhiyamaan college of engineering.
Anna university



Alfred samstephen D A
Bachelor of Engineering (Student)\
Adhiyamaan college of engineering.
Anna university.



ARAVIND NANDHA B K
Bachelor of Engineering (Student)
Adhiyamaan college of engineering.
Anna university



DRAVID KUMAR K
Bachelor of Engineering (Student)
Adhiyamaan collage of engineering.
Anna university.



GYANENDRA PRASAD T
Bachelor of Engineering (Student)
Adhiyamaan college of engineering.
Anna university.



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