

## LITERATURE SURVEY – CAR RESALE VALUE PREDICTION

S.NO	TITLE OF THE PAPER	AUTHORS AND YEAR	NAME OF JOURNAL/ CONFERENCE	METHODOLOGY USED	ADVANTAGE	LIMITATION OF THE SYSTEM
1	Car Price Prediction using Machine Learning Techniques	Enis Gegic, Becir Isakovic, Dino Keco, Zerina Masetic, Jasmin Kevric  [Feb 2019]	TEM Journal	The whole data set collected in this research has been split into training (90%) and testing (10%) subsets and Artificial Neural Network, Support Vector Machine and Random Forest classifiers models were built.	<p>This research, PHP scripts were built to normalize, standardize, and clean data to avoid unnecessary noise for machine learning algorithms.</p> <p>Applying single machine algorithm on the data set accuracy was less than 50%. Therefore, the ensemble of multiple machine learning algorithms has been proposed and this combination of ML methods gains accuracy of more than 90%.</p>	<p>The drawback of the proposed system is that it consumes much more computational resources than single machine learning algorithm.</p> <p>Although, this system has achieved astonishing performance in car price prediction problem our aim for the future research is to test this system to work successfully with various data sets.</p>
2	Car's Selling Price Prediction using Random Forest Machine Learning Algorithm	Abhishek Pandey, Vanshika Rastogi, Sanika Singh  [2019]	<i>5th International Conference on Next Generation Computing Technologies</i>	The process started with pre-processing of data by filling missing values, encoding categorical data, splitting the data and feature scaling. RandomizedSearchCV is used for tuning the hyper-parameter. Random Forest Algorithm and Extra Tree Regression algorithm. Is used for model construction. Cross-validation is an analysis technique and it is used for the assessment of the results.	<p>Good at learning complex and non-linear relationships</p> <p>Highly explainable and easy to interpret</p> <p>Robust to outliers</p> <p>No feature scaling is required</p>	<p>Consumes more time</p> <p>Requires high computational power</p>

3	Used car price prediction	Praful Rane, Deep Pandya, Dhawal Kotak [Apr 2021]	International Research Journal of Engineering and Technology (IRJET)	<p>1. Training phase: The system is trained by using the data in the data set and fits a model (line/curve) based on the algorithm chosen accordingly.</p> <p>2. Testing phase: the system is provided with the inputs and is tested for its working.</p> <p>3. Linear regression, Lasso regression, and ridge regression are used for constructing the model.</p>	Good accuracy is obtained by combining three different machine learning algorithms like Linear Regression, Lasso Regression and Ridge Regression.	<p>It should be bind with various website for providing real time data for price prediction</p> <p>Large historic data is to be used to improve accuracy.</p> <p>Designing deep learning network structures using adaptive learning rates and training on clusters of data rather than the whole dataset to provide better performance.</p>
4	predictive analysis of used car prices using machine learning	Ashutosh Datt Sharma, Vibhor Sharma, Sahil Mittal, Gautam Jain, Sudha Narang [Jun 2021]	International Research Journal of Modernization in Engineering Technology and Science.	<p>Linear Regression, Lasso Regression, Ridge Regression, Bayesian Ridge Regression, Random Forest Regression, Decision Tree Regression, XGBoost Regression, and Gradient Boosting Regression is used for model construction.</p> <p>r<sub>2</sub> scores and other evaluation metrics such as mean absolute error, mean squared error and root mean squared error were obtained for comparison of the performance of each algorithm applied on the model.</p>	Generated more accurate predictions with the help of decision tree algorithm.	<p>Still more algorithms could be used.</p> <p>More training set is to be added.</p>
5	Used Cars Price Prediction and Valuation using Data Mining Techniques	Abdulla AlShared [Dec 2021]	RIT scholar works (theses)	Random Forest Regressor, Linear Regression and Bagging Regressor are the algorithms used for model construction.	<p>An efficient machine learning model is built by training, testing, and evaluating three machine learning regressors named Random Forest Regressor, Linear Regression, and Bagging Regressor.</p> <p>As a result of pre-processing and transformation, Random Forest</p>	<p>More data will be collected using different web-scraping techniques, and deep learning classifiers will be tested.</p> <p>Algorithms like Quantile Regression, ANN and SVM will be tested.</p> <p>Afterwards, the intelligent model</p>

					Regressor came out on top with more than 90% accuracy.	will be integrated with web and mobile-based applications for public use.
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