PUBLICATION / YEAR	TITLE	OVERVIEW	POSITIVE ASPECTS	REFERENCES
IRJET / 04 APRIL 2021	Used Car Prediction - Using AI & Machine Learning Techniques	Predicting the price of Used Car Using Machine Learning & Artificial Intelligence. In this paper, they investigate the application of supervised machine learning techniques to predict the price of used cars in Mauritius. Different techniques like multiple linear regression analysis, k-nearest, naïve bayes and decision trees have been used to make the predictions.Car Price Prediction Using Machine Learning Techniques. Considerable number of distinct attributes are examined for the reliable and accurate prediction.	The increased prices of new cars and the financial incapability of the customers to buy them, Used Car sales are on a global increase. Therefore, there is an urgent need for a Used Car Price Prediction system which effectively determines the worthiness of the car using a variety of features. The proposed system will help to determine the accurate price of used car price prediction. This paper compares 3 different algorithms for machine learning : Linear Regression, Lasso Regression and Ridge Regression.	[1] Sameerchand Pudaruth, “Predicting the Price of Used Cars using Machine Learning Techniques”;(IJICT 2014) [2] Enis gegic, Becir Isakovic, Dino Keco, Zerina Masetic, Jasmin Kevric, ”Car Price Prediction Using Machine Learning”; (TEM Journal 2019)

IJEAT / 11 DEC 2019	Price Prediction for Used Cars	Overfitting and underfitting come into picture when we create our statistical models. The models might be too biased to the training data and might not perform well on the test data set. This is called overfitting. Likewise, the models might not take into consideration all the variance present in the population and perform poorly on a test data set. This is called underfitting. A perfect balance needs to be achieved between these two, which leads to the concept of Bias-Variance tradeoff. Pierre Geurts [2] has introduced and explained how bias-variance tradeoff is achieved in both regression and classification.	The prediction error rate of all the models was well under the accepted 5% of error. But, on further analysis, the mean error of the regression tree model was found to be more than the mean error rate of the multiple regression and lasso regression models. Even though for some seeds the regression tree has better accuracy, its error rates are higher for the rest. This has been confirmed by performing an ANOVA. Also, the post-hoc test revealed that the error rates in multiple regression models and lasso regression models aren't significantly different from each other	[1] Shonda Kuiper (2008) Introduction to Multiple Regression: How Much Is Your Car Worth?, Journal of Statistics Education, 16:3. [2] Geurts P. (2009) Bias vs Variance Decomposition for Regression and Classification. In: Maimon O., Rokach L. (eds) Data Mining and Knowledge Discovery Handbook. Springer, Boston, MA

The Colorado College[Thesis] / 25 MAY 2009	Determinants of Used Car Resale Value	To build a model for predicting the price of used cars in Bosnia and Herzegovina, they have applied three machine learning techniques.Price Evaluation model in second hand car system based on BP neural networks. In this paper, the price evaluation model based on big data analysis is proposed, which takes advantage of widely circulated vehicle data and a large number of vehicle .The selection of variables/attribute plays a vital role in influencing both the bias and variance of the statistical model.	To be sure, the automobile industry is currently undergoing some significant reconstruction and the landscape and makeup of the industry will change. To remain solvent, auto-makers must keep consumer demands as a top priority.	[1] Ning sun, Hongxi Bai, Yuxia Geng, Huizhu Shi, “Price Evaluation Model In Second Hand Car System Based On BP Neural Network Theory”; (Hohai University Changzhou, China) [2] Nitis Monburinon, Prajak Chertchom, Thongchai Kaewkiriya, Suwat Rungpheung, Sabir Buya, Pitchayakit Boonpou, “Prediction of Prices for Used Car by using Regression Models”
RIT / 17 DEC 2021	Predicting Used Car Prices	Transaction data to analyze the price data for each type of vehicles by using the optimized BP neural network algorithm. It aims to establish a second-hand car price evaluation model to get the price that best matches the car. Robert Tibshirani [3] proposed a new method called Lasso, which minimizes the residual sum of squares. This returns a subset of attributes which need to be included in multiple regression to get the minimal error rate. Similarly, decision trees suffer from overfitting if they are not pruned/shrunk.	This study reveals that in addition to historical quality, fuel efficiency, and safety, consumers are interested in vehicles that are perceived as environmentally friendly. Vehicles with hybrid engine technology incorporate a new determinant for resale value, and this determinant has been found to slow the depreciation process in used cars.	[1] Doan Van Thai, Luong Ngoc Son, Pham Vu Tien, Nguyen Nhat Anh, Nguyen Thi Ngoc Anh, “Prediction car prices using qualify qualitative data and knowledge-based system” [2] Robert T. (1996) Regression Shrinkage and Selection Via the Lasso. In: Journal of the Royal Statistical Society: Series B (Methodological) Volume 58.