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A Comprehensive Study of Machine Learning Algorithms for Predicting car Purchasing based on Customers Demands

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Abstract: *The automobile industry is one of the prominent industries for the national economy. Day by day car is getting popular for the private transport system. The customer needs review when he wants to buy the right vehicle, especially the car. Because it is a very costly vehicle. There are many conditions and factors matter before buying a new car like spare parts, cylinder volume, headlight and especially price. So deciding everything, it is important for the customer to make the right choice of purchase which can satisfy all the criteria. Our goal is to help the customer to make the right decision whether he will buy a car or not. Therefore we wanted to build a technique for decision making in-car buy system. That's why we propose some well known algorithms to get better accuracy for a car purchase in our paper. We applied those algorithms in our dataset which contains 50 data. Among them, Support Vector Machine(SVM) gives the best result with 86.7% accuracy of prediction. In this paper, we have also revealed the comparative results using different algorithms precision, recall and F1 score for all data samples.*

Keywords: Supervised Machine Learning, Naive Bayes, Random Forest tree, Support Vector Machine, KNN, Accuracy, Cosine Similarity

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