

MACHINE LEARNING BASED VEHICLE PERFORMANCE ANALYSER

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ABSTRACT

Predicting the performance level of cars is an important and interesting problem. The main goal is to predict the performance of the car to improve certain behaviors of the vehicle. This can significantly help to improve the system's fuel consumption and increase efficiency. The performance analysis of the car is based on the engine type, no of engine cylinders, fuel type, horsepower, etc. These are the factors on which the health of the car can be predicted. It is an ongoing process of obtaining, researching, analyzing, and recording health based on the above three factors. The performance objectives like mileage, dependability, flexibility and cost can be grouped together to play a vital role in the prediction



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engine and engine management system. This approach is a very important step towards understanding the vehicle's performance.



LITERATURE SURVEY

TITLE	AUTHOR & YEAR	PROBLEM PROPOSED	TECHNIQUES USED
Performance of Motor Vehicle based on Driving and Vehicle Data using Machine Learning	Punith Kumar Nagaraje Gowda/ 2021	This project is one such attempt at identifying the performance of small passenger cars in terms of fuel efficiency.	Multiple Linear Regression, XGBoost, Support Vector Machine, Artificial Neural Network.
Vehicle Acceleration Prediction Based on Machine Learning Models and Driving Behavior Analysis	Yajie Zou, Lusa Ding, Hao Zhang, Ting Zhu, Lingtao Wu.	In this study, a vehicle acceleration prediction model based on machine learning methods is proposed.	Long Short-Term Memory (LSTM), Gate Recurrent Unit (GRU)



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Fuel Consumption Models Applied to Automobiles Using Real-time Data: A Comparison of Statistical Models

Çapraz, Ahmet
Gürçan
Özel, Pinar
Şevkli, Mehmet
Beyca, Ömer Faruk
/ 2016

In this paper the prediction of total and instant fuel consumption.

Support Vector Machine (SVM), Artificial Neural Network, Multiple Linear Regression.

Instantaneous vehicle fuel consumption estimation using smartphones and Recurrent Neural Networks

Kanarachos S,
Mathew J,
Fitzpatrick M./
2019

The primary motivation for this paper is to enable fine spatiotemporal monitoring based on crowd sensing.

Recurrent Neural Networks (RNNs), smartphone's GPS



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Driving Style
Analysis Using
Primitive Driving
Patterns With
Bayesian
Nonparametric
Approaches

Wenshuo Wang,
Junquiang Xi, Ding
Zhao/ 2018

This paper presents
a novel framework
for driving style
analysis based on
primitive driving
patterns.

support vector
machine (SVM),
semi-supervised
support vector
machine, neural
networks



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Thank You

