

Modelling Vehicle Fuel Consumption Utilising Artificial Neural Networks

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Abstract : The main source of energy used in this modern age is fossil fuels. There is a myriad of problems that come with the use of fossil fuels, out of which the issues with the greatest impact are its scarcity and the cost it imposes on the planet. Fossil fuels are the only plausible option for many vital functions and processes; the most important of these is transportation. Thus, using this source of energy wisely and as efficiently as possible is a must. The aim of this work was to explore utilising mathematical modelling and artificial intelligence techniques to enhance fuel consumption in passenger cars by focusing on the speed at which cars are driven. An artificial neural network with an error less than 0.05 was developed to be applied practically as to predict the rate of fuel consumption in vehicles.

Keywords : mathematical modeling, neural networks, fuel consumption, fossil fuel

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