

# Simulation and Modelling of Electric Vehicle

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**Abstract:** *Today, electric vehicles are increased among all over the world. Transportation vehicles are playing a major role in many applications. Mostly all type of vehicles using energy sources such as oil and gas. This is an ecological and urban means of transport and it's source of energy is battery. Electric vehicles began to play an more important role Since 2000's. It is economic and simple means of transport and eco friendly. Over the past few years the electric vehicles have remained a frequent subject of the research community. In this article, we developed an EV setup using a DC motor. The model developed contains battery power, DC motor, H-Bridge controller, Wheel configuration (front and rear), PWM controller and vehicle body model developed on Simulink from Matlab. Through Simulink, the designed electric vehicle is simulated and various factors like State of Charge, Current and Voltage were calculated by providing driving cycle. The various factors were analysed for improving the model.*

**Keywords:** State of Charge of Battery, DC Motor, H-Bridge controller

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