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Enhanced Electric Vehicle using Pantograph

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Abstract: *Current Electric vehicle technologies face several limitations, particularly in long distance travel and public transport applications, due to the reliance on batteries, which require long charging times and have limited range and very time consuming system. An electric vehicle (EVs) as one seeks to overcome these difficulties. With numerous advantages, electric vehicle technology has experienced various difficulties like battery charging, expanding electric charges, and accessibility of charging stations and battery life assessment and battery weight also. The smart Electric vehicle is proposed in this paper. Vehicle detection by using ultrasonic sensor and then pantograph is connected and running is started.*

Using ultrasonic sensor, the system identifies when a vehicle is present at the transmission line. Details of the running mechanism, which operates after detecting the battery voltage of the vehicle, are provided in a subsequent section. The suggested setup offers an energy efficient, cost-effective, and eco-friendly method for charging electric vehicles.

Keywords: Pantograph, Electric vehicle, DC voltage sensor, Transmission line.