

International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)

International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal

Volume 4, Issue 6, May 2024

Battery Management System for Electric Vehicle

Samarthi Alane¹, Mangesh Bhushtte², Dhanajay Dudhe³, Dr. S. B. Mule⁴

UG Students, Department of Electronic and Telecommunication^{1,2,3} Professor, Department of Electronic and Telecommunication Sinhgad College of Engineering, Pune, India

Abstract: As humanity is evolving the consumption of energy is increased. Continue power supply is not possible everywhere. So that we require energy storage devices. The stored energy is used in the places where the supply of energy is not available. The stored energy needs to be a monitor protected and easy to use. Battery management system is providing the function of monitoring the storage energy protection from overload and overheating and easy to use for charging and discharging purpose. The stored energy can be transferred from one place to another place easily in the form of battery, cells, or any store energy storage device.

90% of the batteries used in daily life is lithium-ion batteries. The lithium-ion battery can explode due to overheating over current for any fault occurs in a battery. This should be harmful for humankind. We are required to take a protection against this accident so that we required a BMS for the protection and monitoring to increases the lifespan of a cell or battery and the current conditions such as charging, discharging overcharging etc.

Keywords: Energy storage devices, Lithium-ion batteries, Overload protection, overheating protection, Charging, and discharging control, Lifespan optimization, Safety measure, Monitoring, Transferability of stored energy Currency Recognition, Currency Classification, Deep Learning, Convolution Neural Network (CNN), Feature extraction, Image processing

