

STUDY ON ONBOARD AND OFFBOARD CHARGERS & SMART LOCKING SYSTEM

*A Project report submitted in partial fulfillment of the requirements
For the award of the degree of*

BACHELOR OF TECHNOLOGY IN ELECTRICAL & ELECTRONICS ENGINEERING

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Tamaram, Narsipatnam, Anakapalli-531113

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CERTIFICATE

This is certify that the project report entitled " **STUDY ON ONBOARD AND OFFBOARD CHARGERS & SMART LOCKING SYSTEM** " is a bonafide work submitted by **P. NAGA PARVATHI, P. LOHITHA, G. KISHORE, R. SANTOSH DILEEP, Y. NAVYA GANGA MANI DEVI** in partial fulfillment of the requirements for the award of degree of

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INTERNAL GUIDE

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Abstract

As the automotive industry transitions towards electrification, the development of efficient charging infrastructure is crucial. This study investigates and compares the performance, efficiency, and practicality of on-board and off-board chargers for electric vehicles (EVs).

The on-board charger is integrated into the vehicle, allowing for convenient charging at various locations with compatible outlets. In contrast, off-board chargers are standalone units installed at fixed locations such as charging stations or homes.

Key factors analysed include charging time, cost, flexibility, and grid impact. Additionally, considerations such as charging standards, power electronics, and thermal management are evaluated to provide insights into the overall effectiveness of each charging solution.

Through a comprehensive examination of both on-board and off-board chargers, this study aims to provide valuable insights for stakeholders in the automotive and energy sectors to make informed decisions regarding charging infrastructure deployment and EV adoption strategies.

A smart lock system could emphasize its role in providing secure and convenient access control. It might delve into the integration of cutting-edge technologies such as biometrics, IoT, and mobile applications to enhance user experience while ensuring robust security.