

Smart Charging App for EV

A PROJECT REPORT

Submitted by,

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Under the guidance of,

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in partial fulfillment for the award of the degree of

BACHELOR OF TECHNOLOGY

IN

COMPUTER SCIENCE AND ENGINEERING

At



PRESIDENCY UNIVERSITY

BENGALURU

JANUARY 2025

PRESIDENCY UNIVERSITY

SCHOOL OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE

This is to certify that the Project report “Smart Charging App for EV” being submitted by “VENKAT B M, ARUNKUMAR H GURAV, NAGENDRA B S, KUSHAL C S” bearing roll number(s) “20211CSE0430, 20211CSE0406, 20211CSE0435, 20211CSE0422 ” in partial fulfillment of the requirement for the award of the degree of Bachelor of Technology in Computer Science and Engineering is a bonafide work carried out under my supervision.



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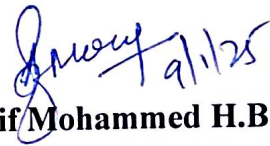


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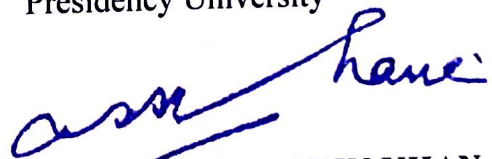


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DECLARATION

We hereby declare that the work, which is being presented in the project report entitled **Smart Charging App for EV** in partial fulfillment for the award of Degree of **Bachelor of Technology** in **Computer Science and Engineering**, is a record of our own investigations carried under the guidance of Ms. Dhanya Dornadhula, Assistant Professor, School of Computer Science and Engineering, Presidency University, Bengaluru.

We have not submitted the matter presented in this report anywhere for the award of any other Degree.

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ABSTRACT

The widespread adoption of electric vehicles (EVs) is driving the need for innovative solutions to optimize charging infrastructure, and the "Smart Charging App for EVs" is designed to transform the charging experience by leveraging technologies like artificial intelligence (AI), blockchain, and dynamic pricing models. This app addresses key challenges faced by EV users, such as locating charging stations, reducing wait times, and ensuring secure transactions, by offering an intuitive interface, AI-powered predictive analytics for recommending optimal charging times and locations, blockchain-based secure and transparent payments, and dynamic pricing to manage demand and maximize station efficiency. Real-time updates, slot booking, and personalized notifications enhance user convenience, while the systematic approach to design, development, and deployment ensures improved accessibility, optimized station utilization, and secure payments. By reducing downtime and enabling better charging planning through AI insights, the app supports a sustainable energy ecosystem and provides a scalable, user-centric solution for the growing EV market, fostering adoption and contributing to global sustainability efforts.