

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

“Jnana Sangama” Belagavi – 590 018



PROJECT REPORT ON

**“DYNAMIC WIRELESS CHARGING OF
ELECTRIFIED VEHICLES”**

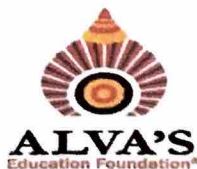
Submitted in partial fulfillment of the requirements for the award of degree

**BACHELOR OF ENGINEERING
IN
ELECTRONICS & COMMUNICATION ENGINEERING**

Submitted By

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**DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING
ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY**

A+, Accredited by NACC & NBA (ECE & CSE)

MOODBIDRI-590 018

2022-2023

ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

MOODBIDRI – 590 018

A+, Accredited by NACC & NBA (ECE & CSE)

(Affiliated to VTU, BELAGAVI)

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CERTIFICATE

Certified that the project work entitled "DYNAMIC WIRELESS CHARGING OF ELECTRIFIED VEHICLES" is a Bonafede work carried out by

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in partial fulfillment for the award of BACHELOR OF ENGINEERING in **ELECTRONICS & COMMUNICATION ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year **2022-2023**. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.


22/5/23

Signature of the Guide

Shwetha M S


Siddesh 22.5.23

Signature of the H.O.D

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Signature of the Principal

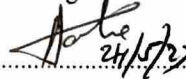
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Signature with date


24/5/23


Siddesh 24.5.23

ABSTRACT

Dynamic wireless charging is a promising technology for charging electrified vehicles on the go, without the need for cables or stopping at charging stations. This technology involves a wireless charging system installed on the road, which transfers power to a receiving unit attached to the vehicle while it is in motion. In this way, the vehicle can charge while driving, eliminating the need for frequent stops and allowing for longer journeys.

The design of a dynamic wireless charging system involves several key components, including the power source, the charging pad, and the receiving unit on the vehicle. The power source can be connected to the grid or can be a standalone unit, such as a solar panel or a battery, and it must be able to generate enough power to charge the vehicle while it is in motion. The charging pad is installed on the road surface and transfers power to the receiving unit on the vehicle using electromagnetic induction.

There are several benefits to dynamic wireless charging, including increased convenience and reduced range anxiety for electric vehicle drivers. It also has the potential to reduce the size and weight of vehicle batteries, which could lead to lower vehicle costs and improved performance. However, there are also challenges to overcome, such as ensuring safety and reliability, as well as dealing with variations in vehicle design and power requirements.

Overall, dynamic wireless charging has the potential to revolutionize the way we charge electric vehicles and make electric transportation more practical and accessible. Ongoing research and development in this area will be crucial in bringing this technology to fruition and making it a viable option for electrified vehicles of the future.