

# **VISVESVARAYA TECHNOLOGICAL UNIVERSITY**

**"Jnana Sangama" Belagavi – 590 018**



## **PROJECT REPORT ON “LORA AND IOT BASED ON SMART IRRIGATION SYSTEM”**

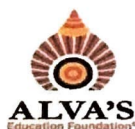
**Submitted in partial fulfillment of the requirements for the award of degree**

**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 NAAC & NBA (ECE & CSE)**

**MOODBIDRI – 574 225.**

**2022-2023**

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

MOODBIDRI - 574 225

(Affiliated to VTU, BELAGAVI)

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

## CERTIFICATE

Certified that the project work entitled "LORA AND IOT BASED SMART IRRIGATION SYSTEM" is a bona fide work carried out by

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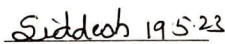
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in partial fulfillment for the award of BACHELOR OF ENGINEERING in ELECTRONICS & COMMUNICATION ENGINEERING of the VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI during the year 2022-2023. It is certified that all corrections/suggestions indicated 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.



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## ABSTRACT

In general, all know that Agricultural plays a chiefly role in Economy, as well as it is the backbone of economic system for developing countries. The LoRa and IoT based smart irrigation project is designed to provide an efficient and convenient solution for farmers to control their water pump, electrical fence, and light systems remotely. The system utilizes Long Range (LoRa) communication technology, combined with Internet of Things (IoT) functionality, to enable farmers to remotely monitor and control their irrigation systems from anywhere, using their smartphones or other devices. The system allows farmers to remotely turn on and off their water pump, electrical fence, and light systems, based on real-time weather data, soil moisture levels, and other relevant parameters.

This helps farmers optimize their irrigation schedules, preventing over-watering and conserving water resources. The smart irrigation system also includes features such as automated scheduling, real-time monitoring of water usage, and customized alerts for abnormal conditions, which enhances the overall efficiency of the irrigation process. The project aims to provide an easy-to-use and cost-effective solution for farmers, which can be integrated into their existing irrigation infrastructure without extensive modifications. The LoRa and IoT based smart irrigation system offers farmers the convenience of remote control, allowing them to manage their irrigation systems efficiently, even from remote locations. The integration of smart control and monitoring capabilities not only saves water but also helps in reducing energy costs and increasing the overall productivity of the farm. The LoRa and IoT based smart irrigation project offers an innovative solution for farmers to effectively manage their water pump, electrical fence, and light systems, resulting in optimized irrigation schedules, reduced water wastage, and increased productivity.