VISVESVARAYA TECHNOLOGICAL UNIVERSITY

JNANA SANGAMA, BELAGAVI–590 018

A Project Report on

"AGRO SHAKTI"

Submitted in partial fulfillment of the requirements for the VII/ VIII Semester of Bachelor of Engineering in Computer Science & Engineering

Submitted by:

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VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELGAVI

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APPROVED BY AICTE, NEW DELHI. Accredited by NAAC with "B++" Grade

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Certificate

This is to certify that **Mr. Mohammed Ansar.,**bearing USN **2AV21CS030** respectively have satisfactorily completed the Project Work entitled **"AGRO SHAKTI"** in partial fulfillment for the VII/VIII semester of Bachelor of Engineering in Computer Science and Engineering of Visvesvaraya Technological University Belagavi, during the year 2024-25. The project report has been approved, as it satisfies the academic requirements in respect of the project work prescribed for the said degree.

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External Viva

Name of the Examiners:	**Signature with Date:**
1.	
2.	

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ABSTRACT

Agriculture is essential for human survival, providing food, raw materials, and employment. However, modern farming faces major challenges such as unpredictable weather, soil degradation, pests, diseases, and inefficient resource use. These issues can reduce crop yields, increase costs, and harm the environment. Traditional techniques often fall short in addressing these complex problems, highlighting the need for innovative, technology-driven solutions to improve productivity and sustainability.This project proposes a smart farming system that integrates Internet of Things (IoT) and Artificial Intelligence (AI) technologies to address these challenges. IoT sensors will be deployed in agricultural fields to monitor key environmental parameters such as soil moisture, temperature, humidity, and light intensity in real time. The collected data will be transmitted to a centralized platform for processing and analysis.AI and machine learning algorithms will analyze the data to detect anomalies, predict potential crop diseases, and assess overall crop health. Predictive analytics will also be used to estimate crop yields, helping farmers plan harvests, manage inventory, and optimize marketing strategies. These AI-driven insights will enable farmers to make timely, data-informed decisions, enhancing the efficiency and productivity of their operations. By leveraging IoT and AI, this smart farming solution aims to minimize waste, improve crop yields, and promote sustainable agriculture. The system will bridge the gap between traditional farming and modern technology, contributing to food security and economic resilience. Ultimately, the project seeks to empower farmers with advanced tools to meet current and future agricultural challenges effectively.

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