#### VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi - 590 018



### PROJECT REPORT ON

## "FARMER FRIENDLY MAIZE MOISTURE LEVEL TESTING MACHINE""

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.** 

2023-2024

# ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY MOODBIDRI – 574 225

(Affiliated to VTU, BELAGAVI)

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING A+, Accredited by NAAC & NBA (ECE & CSE)

### **CERTIFICATE**

Certified that the project work entitled "FARMER FRIENDLY MAIZE MOISTURE LEVEL TESTING MACHINE"" is a bona fide work carried out by

P V Likhitha Veena Sadashiv Talawar 4AL20EC029 4AL20EC059

in partial fulfillment for the award of BACHELOR OF ENGINEERING in ELECTRONICS & COMMUNICATION ENGINEERING of the VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI during the year 2023–2024. 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 theacademic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.

Signature of the Guide

Mr. Sudhakara H M

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Signature of the Principal

Dr. Peter Fernandes
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#### **ABSTRACT**

An innovative method for detecting maize moisture levels using capacitive sensors, specifically designed to meet the demands of frame-friendly applications. Capacitive sensing, known for its simplicity, affordability, and non-destructive nature, emerges as an ideal solution for integrating moisture detection into agricultural frameworks. The system addresses the pressing need for precise and efficient moisture measurement in maize grains. Importantly, the capacitive sensor design minimizes any potential interference with the maize grains, ensuring their integrity remains intact during detection processes. Real-time monitoring capabilities are enabled, eliminating the need for manual intervention and allowing for continuous surveillance of moisture levels. Such monitoring proves invaluable for timely decision-making regarding harvesting and storage practices. Additionally, the system's compact size and low power consumption render it highly adaptable to various agricultural environments. Leveraging advanced signal processing techniques further enhances the accuracy and reliability of moisture measurements. Moreover, the system architecture facilitates seamless integration with existing farm management systems, paving the way for comprehensive data analysis and informed agricultural practices. Experimental results substantiate the efficiency of the capacitive sensor-based approach in delivering precise and actionable insights into maize moisture levels.