

# **AI SOLUTION FOR FARMERS**

**A PROJECT REPORT**

*Submitted by,*

**ASHOK D S-20201CSE0225**

**C.VENKATESHWARA REDDY-20201CSE0353**

**T.D.V.KARTHIK-20201CSE0273**

**R.D.ADITYA-20201CSE0296**

*Under the guidance of,*

**Mr. P PENIEL JOHN WHISTELY**

*in partial fulfillment for the award of the*

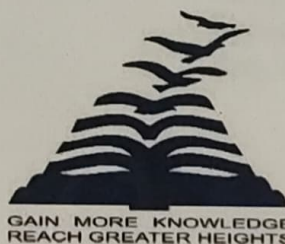
*degree of*

**BACHELOR OF TECHNOLOGY**

**IN**

**COMPUTER SCIENCE AND ENGINEERING**

**At**



**PRESIDENCY UNIVERSITY**

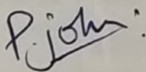
**BENGALURU**

**JANUARY 2024**

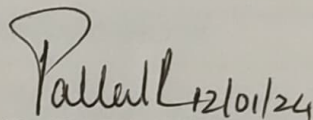
**PRESIDENCY UNIVERSITY**  
**SCHOOL OF COMPUTER SCIENCE<sup>AND</sup> ENGINEERING**

**CERTIFICATE**

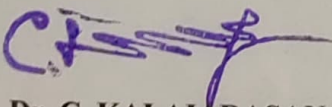
This is to certify that the Project report “AI SOLUTION OF FARMERS”  
being submitted by “ASHOK.D.S,C.VENKATESHWARA  
REDDY,T.D.V.KARTHIK,R.D.ADITHYA” bearing roll number(s)  
“20201CSE0225,20201CSE0353,20201CSE0273,20201CSE0296” in  
partial fulfilment of requirement for the award of degree of Bachelor of  
Technology in Computer Science And Engineering is a bonafide work  
carried out under my supervision.



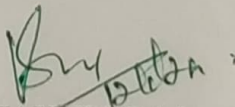
**Mr.P PENIEL JOHN WHISTELY**  
Assistant professor  
School of CSE  
Presidency University



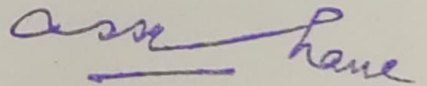
**Dr.PALLAVI.R**  
Associate Professor & HOD  
School of CSE  
Presidency University



**Dr. C. KALAIARASAN**  
Associate Dean  
School of CSE&IS  
Presidency University



**Dr. SHAKKEERA L**  
Associate Dean  
School of CSE&IS  
Presidency University



**Dr. SAMEERUDDIN KHAN**  
Dean  
School of CSE&IS  
Presidency University

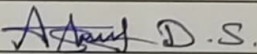
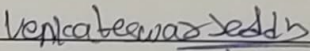
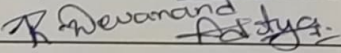
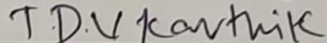
# PRESIDENCY UNIVERSITY

## SCHOOL OF COMPUTER SCIENCE AND ENGINEERING

### DECLARATION

We hereby declare that the work, which is being presented in the project report entitled **AI SOLUTION OF FARMERS** in partial fulfilment 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 **Mr. P.PENIEL JOHN WHISTELY, ASSISTANT PROFESSOR, School of Computer Science Engineering , Presidency University, Bengaluru.**

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

Name of The Student	Roll Number	Student signature
Ashok D S	20201CSE0225	
C Venkateshwara Reddy	20201CSE0353	
R D Aditya	20201CSE0296	
T D V Karthik	20201CSE0273	

## ABSTRACT

This AI solution addresses the challenges faced by farmers in optimizing crop selection based on soil quality parameters, specifically Nitrogen (N), Phosphorus (P), and Potassium (K), commonly known as NPK. The system integrates additional environmental factors such as temperature, humidity, and rainfall to provide a comprehensive analysis for informed decision-making in agriculture. By leveraging machine learning algorithms, the AI model analyzes historical and real-time data to assess the soil composition and environmental conditions, offering insights into the most suitable crops for cultivation. The target variable of this solution is the recommended crop for planting, taking into account the optimal NPK levels and environmental factors. This innovative approach empowers farmers with personalized recommendations, enhancing crop yield and sustainability while minimizing resource input. The AI solution serves as a valuable tool in modernizing agricultural practices, fostering efficiency, and contributing to the overall well-being of the farming community.

The target variable of this AI solution is the recommendation for the most suitable crop to plant, given the observed soil quality and environmental parameters. The model employs a predictive approach, learning from a vast dataset of crop-yield relationships and identifying patterns that correlate with optimal growth conditions. By considering the unique combination of NPK levels and climate variables, the AI system generates personalized crop recommendations for individual farmers.



## ACKNOWLEDGEMENT

First of all, we indebted to the **GOD ALMIGHTY** for giving me an opportunity to excel in our efforts to complete this project on time.

We express our sincere thanks to our respected ~~Dean~~ <sup>and</sup> **Dr. Md. Sameeruddin Khan**, Dean, School of Computer Science<sup>^</sup> Engineering & Information Science, Presidency University for getting us permission to undergo the project.

We record our heartfelt gratitude to our beloved Associate Deans **Dr. C. Kalaiarasan** and **Dr. Shakkeera L**, School of Computer Science<sup>and</sup> Engineering & Information Science Presidency University and **Dr. Pallavi.R** Head of the Department, School of Computer Science<sup>and</sup> Engineering Presidency University for rendering timely help for the successful completion of this project.

We would like to convey our gratitude and heartfelt thanks to the University Project-II Coordinators **Dr. Sanjeev P Kaulgud**, **Dr. Mrutyunjaya MS** and also the department Project Coordinators. **Mr. Mohammed Zia ur Rahman**

We are greatly indebted to our guide **Mr. P PENIEL JOHN WHISTELY**, School of Computer<sup>and</sup> Science<sup>^</sup> Engineering Presidency University for his inspirational guidance, valuable suggestions and providing us a chance to express our technical capabilities in every respect for the completion of the project work.

We thank our family and friends for the strong support and inspiration they have provided us in bringing out this project.

ASHOK D S

C.VENKATESHWARA REDDY

T.D.V.KARTHIK

R.D.ADITYA