AI SOLUTION FOR FARMERS

A PROJECT REPORT

Submitted by,

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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

GAIN MORE KNOWLEDGE
REACH GREATER HEIGHTS

PRESIDENCY UNIVERSITY

BENGALURU

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PRESIDENCY UNIVERSITY
SCHOOL OF COMPUTER SCIENCE AND 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.

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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
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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.

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

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