Informatics Institute of

Technology in Collaboration

With

University of Westminster

University of Westminster, Coat of Arms

HOME GROW

Home Based Crop Recommendation System using IOT.

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ABSTRACT

The goal of this study is to make an IoT-based Crop Recommendation System that will help home gardeners get the most out of their crops while having less of an effect on the environment. With the world's population growing and the need for food rising, it's more important than ever to handle crops well. The suggested system will use a variety of sensors and data-gathering methods to collect information about crop growth. This information will include soil moisture, temperature, humidity, and other important factors. This information will be used to give people timely advice on how much water and fertilizer crops need, how to get rid of pests, and other important management strategies.

The study will use a mixed-methods approach, which means that it will use both quantitative and qualitative ways to collect data, like surveys and field trials, as well as focus groups and conversations. The study method will include data analysis, system design, system development, and system testing.

The system's effectiveness will be judged by how well it can improve crop yield while using less water and fertilizer. The system's effect on the earth will also be looked at by figuring out how much greenhouse gas emissions will be cut and how long the gardening methods will last. The study results will help guide the development of similar systems in the future by giving information about how possible and effective the proposed system is.

In conclusion, the proposed study wants to make an IoT-based Crop Recommendation System so that home gardeners can get the most out of their crops while having less of an effect on the environment. The proposed method could change the way people garden at home and provide a sustainable way to meet the growing population's need for food.

Keywords – Internet of Things, Machine Learning, Naïve Bayes, Random Forest, Decision Tree, Linear Regression, Support Vector Machines, K-Nearest Neighbors.