

(54) Title of the invention : SOILLESS AGRICULTURAL MONITORING AND CONTROLLING BASED ON IOT

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(57) Abstract :

IoT-based smart farming makes it possible for farmers and farmers to reduce waste and increase productivity ranging from quantities of fertilizer to the number of traveling operations by agricultural vehicles and to efficiently utilize resources such as water, power, etc. IoT intelligent farmer solutions are a system designed with sensors (light, humidity, temperature, soil humidity, crop health, etc.) and the automation of irrigation systems for monitoring the crop field. The prediction of crop yield is extremely difficult due to its reliance on many factors including crop genotype, environmental conditions, management techniques and their interfaces. The information collected by farm sensors is used to forecast the production rate of the crop artificial network. This information contains parameters such as soil, temperature, pressure, precipitation and moisture. Precise yield prediction requires a basic overview of the key relationship between yield and those interacting factors and requires both detailed datasets and efficient algorithms to demonstrate that relationship. A machine learning environment based on environmental data is proposed using IoT for crop yield prediction. To collect such data, a wireless sensor network is set up and retrospectively uploaded to the cloud. We also rendered feature selection based on a trained machine learning model, which enhanced prediction accuracy successfully. Farmers can obtain precise soil information either via the dashboard or via a custom mobile app. Our calculative results showed that the model surpassed other common machine learning approaches significantly.

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