

Real Time Gradient Analysis For Disease Prediction in Smart Aeroponics

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Abstract

Smart aeroponics is a sophisticated soil -free farming technology which allows for better control of the environment conditions thus ensuring more effective and resource saving production processes. Nevertheless, one of the main problems that continue affecting crops in smart area foil farms is plant diseases caused by fast changes in the environment and its nutritional properties. In view of the problem, the present research aims at creating advanced gradient analysis system that would allow prediction plant diseases in a real - time information about temperature, humidity, pH level, nutrients and most gradients.

Then based on the data gathered by means of sensor, certain intelligent algorithms would be used to identify any abnormal changes or gradient shift that may be signify the emergence of plant diseases. With the help of wireless communication technologies, all data would be transmitted and monitor automatically. Based on any abnormalities revealed in the process a user would be provided with alerts concerning possible plant disease emergence thus allowing avoiding serious losses and crop damage.

Index Terms

Aeroponics, Gradient Analysis, IoT, Plant Disease, Detection, Smart Farming