

ABSTRACT

The aim of this project is mainly to develop a pesticide sprayer than can detect the health of the plant and spray pesticide, if necessary, in an agricultural setting. The proposed method was demonstrated in a python that allows the user to analyze the health of the plant and control the spraying application using a robot based on raspberry pi. The spraying system was implemented using raspberry pi. The performance of the system was evaluated in terms of the accuracy and response time of the disease identification system and the specific spraying pressure test. It is observed that CNN proves 90% accurate for plant disease classification, whereas SVM is 85%. However, it is also noted that CNN takes an average of 9.6 seconds to respond while SVM takes 0.9 seconds. This is due to the large training database using 50-layer neural network that CNN runs every time. Overall, the developed prototype proved to be accurate and effective in spraying pesticide on defected crops by means of movement based optimum user control.