ABSTRACT

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Potato-Disease-Detection Website using DL

Submitted to

DEPARTMENT OF INFORMATION TECHNOLOGY

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ABSTRACT

Potato is a major food crop, grown in more than 100 countries around the world and it is a temperature crop grown under subtropical conditions in India. However, some potato diseases hamper potato production that can result in huge losses for farmers. The effort, time and money spent by farmers on the crop all goes to waste. This disruption also results in prices of potatoes to go up. These are undesirable consequences of a diseased potato crop. Therefore, an automated and rapid disease detection process needs to be developed which can increase potato production and help farmers grow potato crops successfully. Our main goal is to diagnose potato disease using potato leaf images through efficient Deep Learning techniques. This project offers a website that processes potato leaves using DL and predicts whether the crop is healthy or diseased. In this project, the dataset has been collected from Kaggle and the dataset is owned by PlantVillage non-profit organization originally. This dataset consists of three classes depicting the state of the potato crop i.e Healthy, Early blight and Late blight respectively. The DL model was trained on this dataset consisting of 2152 files belonging to the three classes mentioned above. The model gives 96% accuracy on the test data. The website produces an output by taking a potato leaf image as input and predicts the state of the crop whether it is healthy, has Early blight, or Late blight.

EXISTING SYSTEM

India, as with most developing countries, the existing method for detection of blight is performed manually where the parts of a potato plant have to undergo a sequence of several examinations under a controlled environment.This requires the establishment of laboratories in remote areas where access to various lab equipment is difficult and not environmentally friendly . The main aim is to address the above issues and to improve the quality and quantity of potato production by using advanced technologies. Digitalising the identification of disease helps farmers to examine their crops without much effort and saves time.

PROPOSED SYSTEM

It is statistically observed that image processing is the best solution for detecting and analyzing potato crop diseases. This project aims to speed up the process of potato crop disease detection using advanced Deep Learning techniques. It also provides a user-friendly UI through which a potato leaf image is processed and the prediction is displayed.

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INTERNAL GUIDE
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PROJECT INCHARGE
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