Dr. V:-Your Vegi Doctor

A Major Project Synopsis Submitted to

Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal

Towards Partial Fulfillment for the Award of

Bachelor of Technology

(Computer Science and Information Technology)

Under the Supervision of:

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Submitted By

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Project Proposal: Dr. V -: Your Vegi doctor

Project Category:

a) Mobile/Web application (Android)

b) Machine Learning / Deep Learning [6]

Problem Statement:

Farmers who grow potatoes suffer from serious financial standpoint losses each year which cause several diseases that affect potato plants. The diseases Early Blight and Late Blight are the most frequent. Early blight is caused by fungus and late blight is caused by specific micro-organisms and if farmers detect this disease early and apply appropriate treatment then it can save a lot of waste and prevent economical loss. The treatments for early blight and late blight are a little different so it's important that you accurately identify what kind of disease is there in that potato plant. Behind the scene, we are going to use Convolutional Neural Network – Deep Learning to diagnose plant diseases.

Scope

It is an android/web app which help farmer and any other person to detect potato related diseases. It has following features
1: Image Search
2:It will show the type of diseases
3:Quick Treatment
4:Easy to use

Specific Objectives:

Facilitate easy searching of potato related disease problems for user.

Stake Holders of Project

Anyone.

Background

There is no current web application based on potato disease detection.

Review of Literature:

Title	Reference	Date and year of publication/release of project	Features
Plant Disease and Treatment	Play store	12 aug-2021	It gives theory treatment for plant diseases.
Plant Disease Identification	Play store	2Feb-2022	It is a book related to the diseases of plants
Leaf Snap Plant Identification	Play store	10Aug-2022	It has huge plant database that constantly learns and add information about new plant species.

Whether the Implementation and deployment of the project idea (yes/no)

a) Has Social benefits. (yes)

b) Has Environmental Benefits. (yes)

c) Considers health, safety, legal and cultural issues. (no)

d) Considers sustainable development (economic development that is conducted without depletion of natural resources). (yes)

e) Applies ethical principles while selecting project (not to steal other's project idea, code and documents). (yes)

f) Commits to professional ethics and responsibilities and norms of the engineering practice. (yes)

g) Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools. (yes)

h) Identify, formulate, review research literature, and analyze engineering problems reaching substantiated conclusions. (yes)

Technological know-how required for proposed project idea:

a) Model Building :**TensorFlow** [1][4] and **CNN (Convolutional Neural Network)**. [8]

b) Backend **: tfserving**.[2] [7]

c) Frontend: **React JS** .(JavaScript) [3]

Key Personnel and their expertise

Student Name and Enrollment No.	Technical Expertise
Prakhar Jain (0827CI191044)	C, C++, MySQL , Python , Machine Learning, ReactJs
Sahaj Makwana (0827CI191049)	MySQL , Python , Machine Learning
Snehal Singh Solanki (0827CI191056)	C, C++, MySQL , Python, HTML, CSS, Machine Learning

Proposed Timetable

	Description of Work	Expected no. of weeks to complete the module
Module One	Data Collecting and Preprocessing	2 weeks
Module Two	Model Building	1 month
Module Three	Web/Mobile App Building	2 months

Project Benefits:

Main Focus

The user will be able to detect the type of disease in a vegetable

Image Search by clicking photos from camera**.**

References:

[1]https://www.tensorflow.org/federated/api_docs/python/tff/simulation/datasets/stackoverflow/load_data

[2] www.Github.com

[3] www.Youtube.com

[4] https://www.tensorflow.org/resources/models-datasets

[5] https://www.oreilly.com/library/view/tensorflow-for-deep/9781491980446/

[6] https://www.google.co.in/books/edition/Deep_Learning/omivDQAAQBAJ?hl=en&gbpv=1&dq=online+book+on+machine+learning&printsec=frontcover

[7] https://www.tensorflow.org/tfx/guide/serving

[8] https://towardsdatascience.com/a-comprehensive-guide-to-convolutional-neural-networks-the-eli5-way-3bd2b1164a53