**Dr. V:-Your Vegi Doctor**

**A Major Project Synopsis Submitted to**

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**Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal**

**Towards Partial Fulfillment for the Award of**

**Bachelor of Technology**

**(Computer Science and Information Technology)**

**Submitted By**

**Prakhar Jain (0827CI191044)**

**Sahaj Makwana(0827CI191049)**

**Snehal Singh Solanki (0827CI191056)**

**Under the Supervision of:**

**Dr. Praveen Gupta**



**Department of Computer Science and Information Technology**

**Acropolis Institute of Technology & Research, Indore**

**July-Dec 2022**

**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>

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