Project Design Phase-I
Proposed Solution Template

Date	20 October 2023
Team ID	Team-592955
Project Name	Potato Disease Classification
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	The objective is to develop a deep learning model for potato disease classification that specifies whether the potato is healthy or early blight or late blight. The problem is to design a model that can achieve the high rate of accuracy classification.
2.	Idea / Solution description	We can accurately classify potato leaves by using deep learning techniques, like transfer learning, or other models. Continuous leaning from more data helps improve accuracy. This application provides real time potato leaves monitoring for enhanced farmer benefits.
3.	Novelty / Uniqueness	This solution's uniqueness stems from its precise potato leaves classification achieved by employing advanced deep learning techniques such as CNN, transfer learning and other techniques. What sets it apart is it capacity to constantly enhance accuracy by learning from stored data.
4.	Social Impact / Customer Satisfaction	The potato leaves disease classification technique has a significant social impact. By accurate identifying and diagnosing diseases in potato crops, it helps farmers take timely preventive measures and minimize crop losses. This, in turn, ensures a more stable and reliable food supply, reduces economic hardship for farmers, and enhances food security in communities that rely on potatoes as a staple crop.
5.	Business Model (Revenue Model)	The business model for a potato disease classification technique can be structured as a subscription-based service for farmers. Subscribers would receive regular access to the disease classification system and analysis reports for their crops, enabling timely interventions. The revenue would also come from consulting services for implementing preventive measures. Collaborations with agricultural suppliers to offer integrated solutions and data licensing to agricultural research institutions could provide additional income streams.

6.	Scalability of the Solution	The scalability of the proposed solution for potato leaf disease classification appears promising. Leveraging machine learning and image processing techniques, it can accommodate a growing dataset of potato leaf images, making it capable of handling increased sample sizes without a significant increase in computational complexity. Additionally, the modular design allows for easy integration of additional disease types and improvements in accuracy as more data becomes available. This scalability is critical for adapting to changing agricultural conditions and continuously improving disease detection.