Project Design Phase-I
Proposed Solution Template

Date	23 October 2023
Team ID	592885
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 practise of discovering and classifying different illnesses that afflict potato plants is known as potato disease classification. Early detection enables farmers to take quick measures to stop the disease's spread and minimise crop damage. It is believed that potato infections globally cause considerable yield losses, ranging from 20% to 50%, which can have a serious impact on food security and economic stability. Statistics regarding potato diseases can vary depending on the region. Farmers' ignorance of the disease and its effects on plants made it impossible to identify the problem.
2.	Idea / Solution description	The objective of the study is to offer a complete deep learning solution for classifying potato leaf images into healthy, early blight, and late blight groups. In the suggested method, convolutional neural networks (CNNs) are utilised to extract relevant features from the input photographs and classify them into one of the three categories.
3.	Novelty / Uniqueness	The distinction of this approach comes from the accurate classification of potato leaves it achieves using cuttingedge deep learning techniques like CNN.approaches such as transfer learning. Why is it unique In addition, it has the ability to constantly improve accuracy.by using data that has already been stored to learn from.
4.	Social Impact / Customer Satisfaction	Farmers that successfully recognise and control potato illnesses can increase the consistency of their potato crop. This contributes to greater food security. Accurate disease classification can facilitate market entry and trade prospects for potato growers while also ensuring that food satisfies global quality and safety requirements. By correctly categorising diseases, farmers can lower output costs associated with the improper application of pesticides and other management methods.

5.	Business Model (Revenue Model)	Offer farmers and agricultural enterprises the option to subscribe to a service that will give them regular access to a comprehensive database and platform for categorising potato illnesses in exchange for a regular fee. Form partnerships with input providers, agricultural technology companies, and seed distributors to include disease classification services in their offerings. To create income together, receive a portion of the sales of seeds and other agricultural products. Send requests for funding and grants for research to private foundations, public organisations, and agricultural research organisations.
6.	Scalability of the Solution	Invest in ongoing research and development to increase the solution's scalability by embracing the most recent developments in agricultural sciences and technology. Identify the important players, such as farmers, agricultural organisations, researchers, and policymakers, by conducting a detailed investigation. Recognise their particular requirements, issues, and expectations in relation to the suggested solution.Create strategic alliances and relationships with regional agricultural associations, universities, and governmental organisations in the new target markets.