

Project Design Phase-I
Solution Architecture

Date	9 November 2023
Team ID	Team-592967
Project Name	Project – Potato Disease Classification
Maximum Marks	4 Marks

Solution Architecture:

Image Processing

1. Collect photos of potato leaves. This can be done using a mobile app, a camera, or other means.
2. Clean and preprocess the data. This may involve removing noise, resizing the images, and converting them to a consistent format.
3. Create a training dataset. This dataset should include images of potato leaves with various diseases, as well as images of healthy leaves.
4. Augment the training dataset. This can be done by flipping, rotating, and cropping the images to create more data.

Model Building

1. Choose a machine learning model. Convolutional neural networks (CNNs) are well-suited for image classification tasks.
2. Train the model on the training dataset. This process can take several hours or even days, depending on the size and complexity of the dataset.
3. Evaluate the model on a held-out test dataset. This will give you an estimate of how well the model will generalize to new data.
4. Quantize the model. This will reduce the size of the model and make it faster to deploy.

Deployment

1. Deploy the model to a cloud platform. Google Cloud Functions is a good option for this, as it allows you to deploy functions without having to manage any infrastructure.
2. Create a mobile app or website that allows users to upload images of potato leaves. The app or website should then send the images to the cloud function for classification.
3. The cloud function will classify the images and return the results to the app or website. The app or website can then display the results to the user.

Solution Architecture Diagram:

