

Project Design Phase-II
Data Flow Diagram & User Stories

Date	22 October 2023
Team ID	Team- 592909
Project Name	Project - Potato Disease Classification
Maximum Marks	4 Marks

Data Flow:

Data collection:

In this step, we collect various pictures of potato leaves from different places like fields, image libraries, or other sources. These pictures are then kept in a storage for raw data.

Data preprocessing:

Raw potato leaf images are pre-processed to prepare them for model training. We might change their size, make sure the colors are set up in the right way, and use techniques to make the dataset more varied. This helps the model learn better.

Model Training:

The pre-processed data can now be used to train deep learning model, which learns to classify potato leaf disease. The trained model is saved for future use.

Model Evaluation:

We check how well the trained model works by using a different set of pictures that it hasn't used before. We want to see how accurate it is at finding diseases and how good it is at not making mistakes.

Model Deployment:

In this step, deployment of trained model is to be done, to make it accessible for real-world disease classification applications.

User interaction:

End-users interact with the deployed model through a user-friendly application or API, enabling them to submit potato leaf images for disease identification and receive prompt results.

Flow in the model:

The process begins with data being acquired from the Data Repository. This data undergoes a transformation during the Data Preprocessing phase to become pre-processed data.

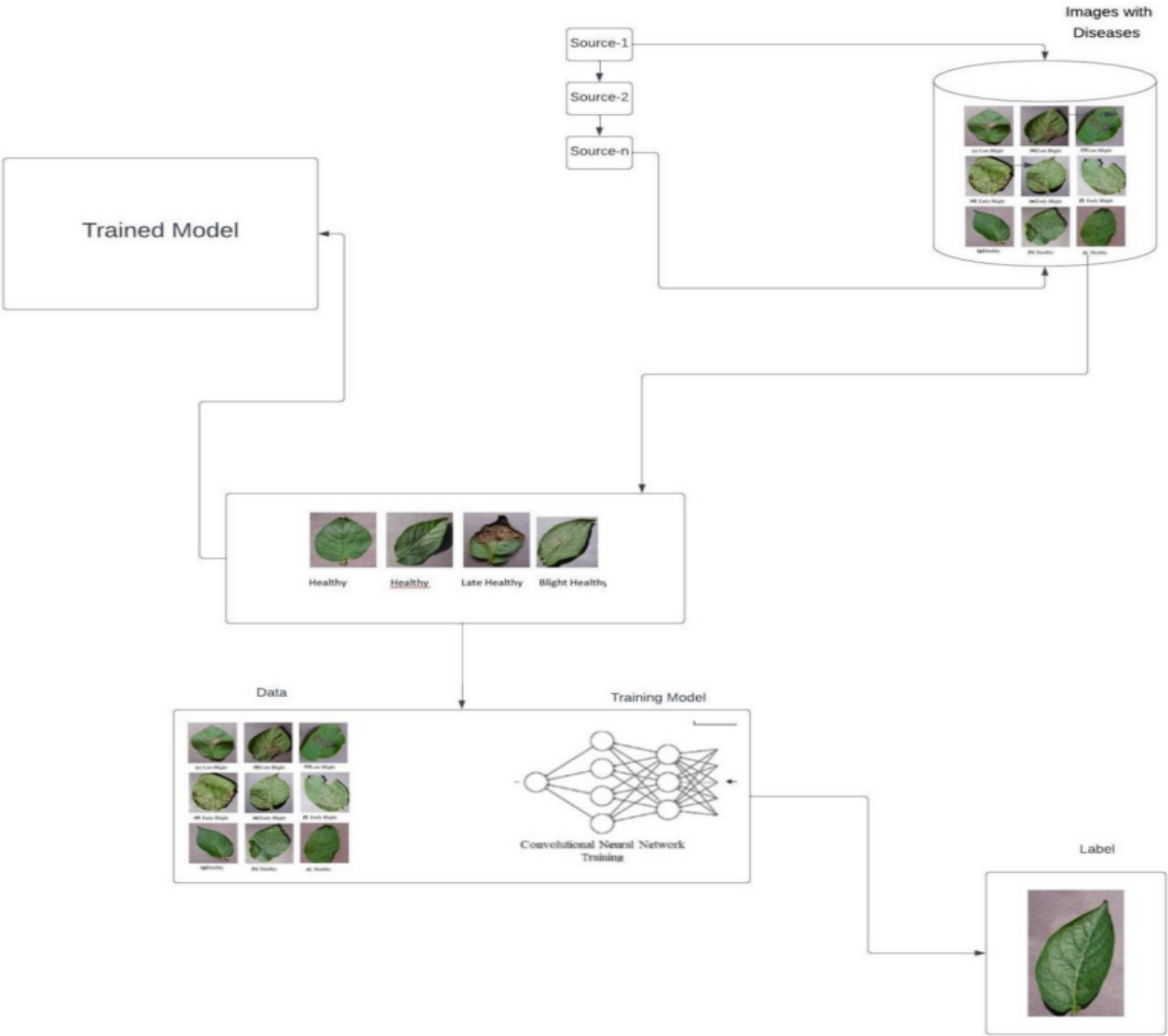
Subsequently, the pre-processed data is directed to the Model Training phase, where the model is trained using this prepared dataset. Once trained, the model becomes capable of performing classification tasks.

To assess the model's accuracy and performance, a separate dataset is utilized in the Model Evaluation phase.

When the model is considered ready, it can be made available to users by deploying it from the Trained Model Repository, providing accessibility.

Users can then interact with the deployed model in the user Interaction process, where they submit potato leaf images for classification.

Data flow diagram:



User Stories

Use the below template to list all the user stories for the product.

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Potato farmer	Registration	USN-1	I require a system for classifying potato diseases that can rapidly distinguish the particular ailments afflicting my crops. This will enable me to promptly apply precise treatments to thwart further harm and guarantee a productive harvest.	I can access my account / dashboard	High	Sprint-1
Research scientist	Research on plants	USN-2	Gain access to the disease classification system using an intuitive interface, accessible either through a web-based application or a mobile app.	The potato disease classification system needs to have a big database that includes many different potato diseases, even the ones that don't happen often. This way, it can offer lots of information for research purposes.	High	Sprint-1
agronomist		USN-3	I need a user-friendly potato disease classification app that's simple to use in the field. This app would enable me to offer immediate assistance to farmers in diagnosing and dealing with disease problems, ultimately enhancing crop	The potato disease classification system should offer prompt and precise details about different potato diseases, covering their	Medium	Sprint-2

			health and yield.	symptoms, causes, and the right methods for managing them. This will empower agronomists to make well-informed choices and offer effective advice to farmers.		
Government agriculture officer		USN-4	I'm in charge of looking after potato diseases in a whole region. I need an advanced potato disease classification system for figuring out what diseases are there, especially for a big of data. This will help me make good decisions and take steps to stop these diseases from hurting our farms and making sure we have enough food in our region	It needs to be good at handling lots of data and quickly figuring things out. This way, government agricultural folks can use it to make smart choices and take quick actions to stop diseases from spreading in a big area, like a whole region or even the entire country.	Medium	Sprint-1
Student studying plant pathology		USN-5	I am interested in learning about various potato diseases and their classifications. I would benefit from an interactive and educational potato disease classification platform that provides comprehensive information , helping me to understand the complexities of potato diseases and their impact on global agriculture.	The potato disease classification system should provide comprehensive and detailed information about various potato diseases, including their classifications, etiology, symptoms, and management strategies, enabling students to	High	Sprint-1

				deepen their understanding of plant pathology.		
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