

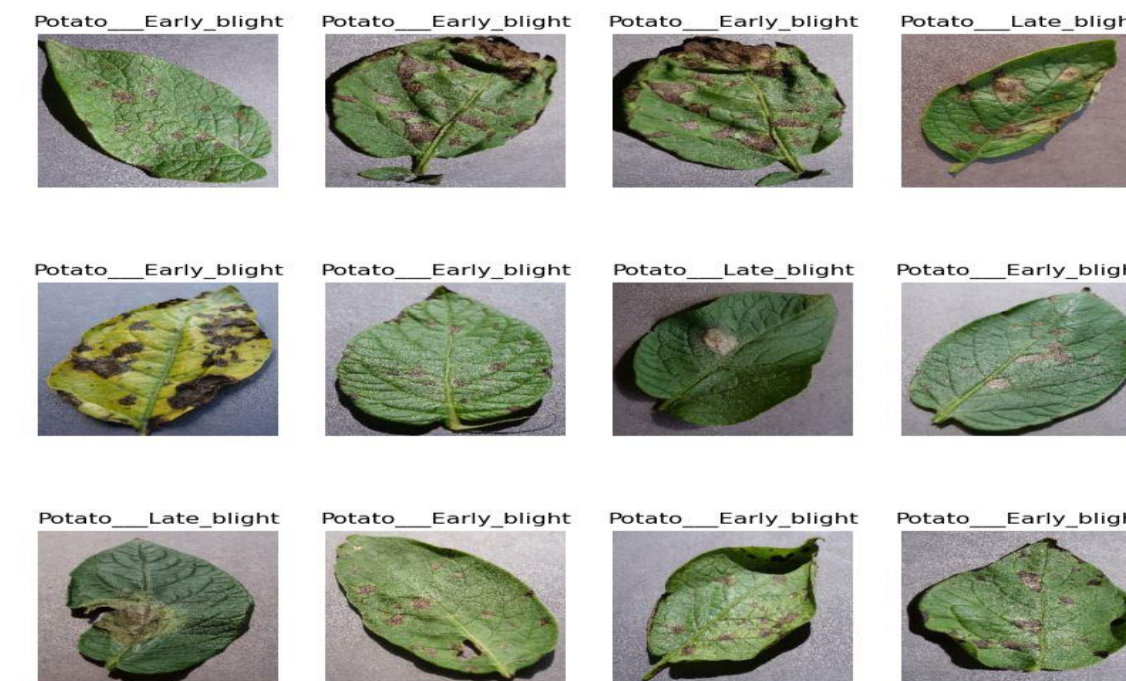
Plant Disease Detection: Convolutional Neural Networks (CNN) Implementation for Potato

- NirajKC

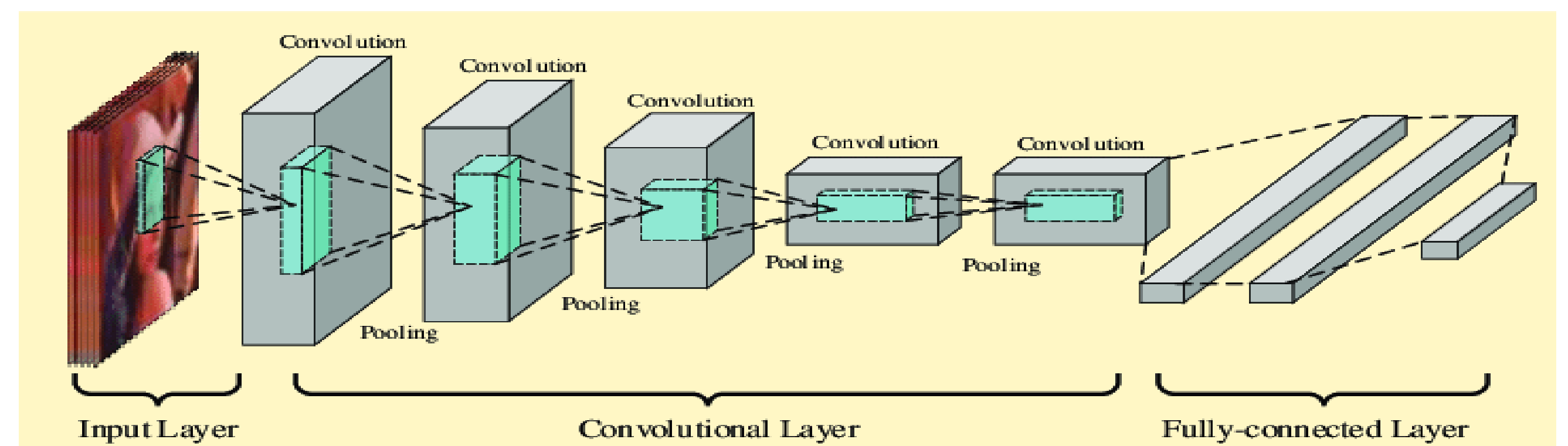
Introduction

Why AI/ML ?

- Early Detection
- Accurate Diagnosis
- Real-Time Monitoring.
- Reduced Manual Labor.
- Data-Driven Insights
- Scalability
- Cost-Efficiency: Initially require investment but later save cost.
- Environmental Benefits: reduce excessive pesticide and chemical use through more targeted treatments.



CNN ARCHITECTURE

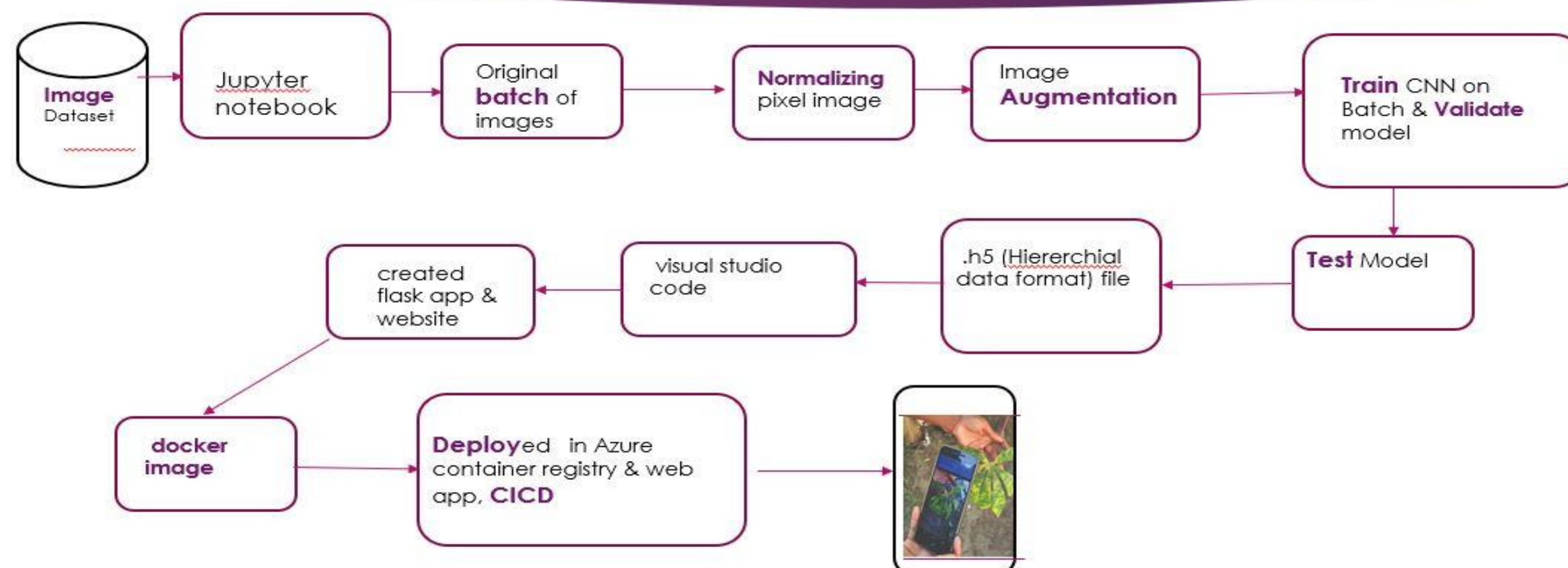


Data source:

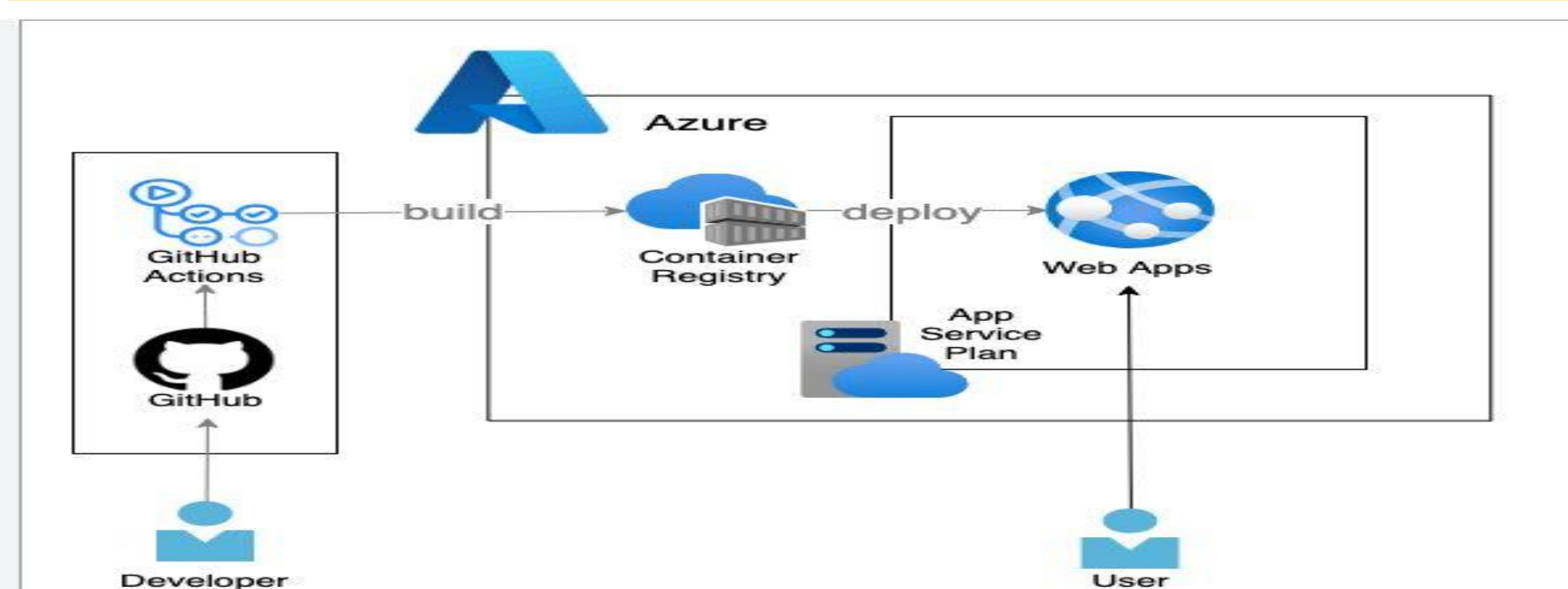
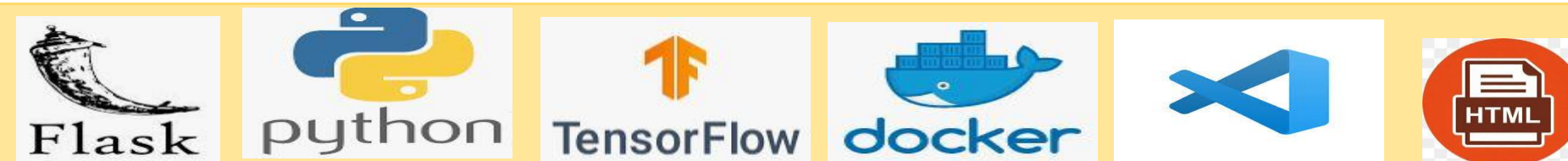
(<https://www.kaggle.com/datasets/arjuntejaswi/plant-village>)

Dataset has 2152 files belonging to 3 classes: Early blight, Late blight & Healthy.

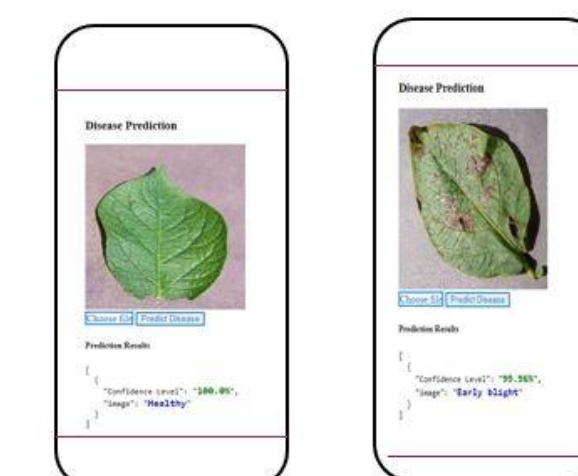
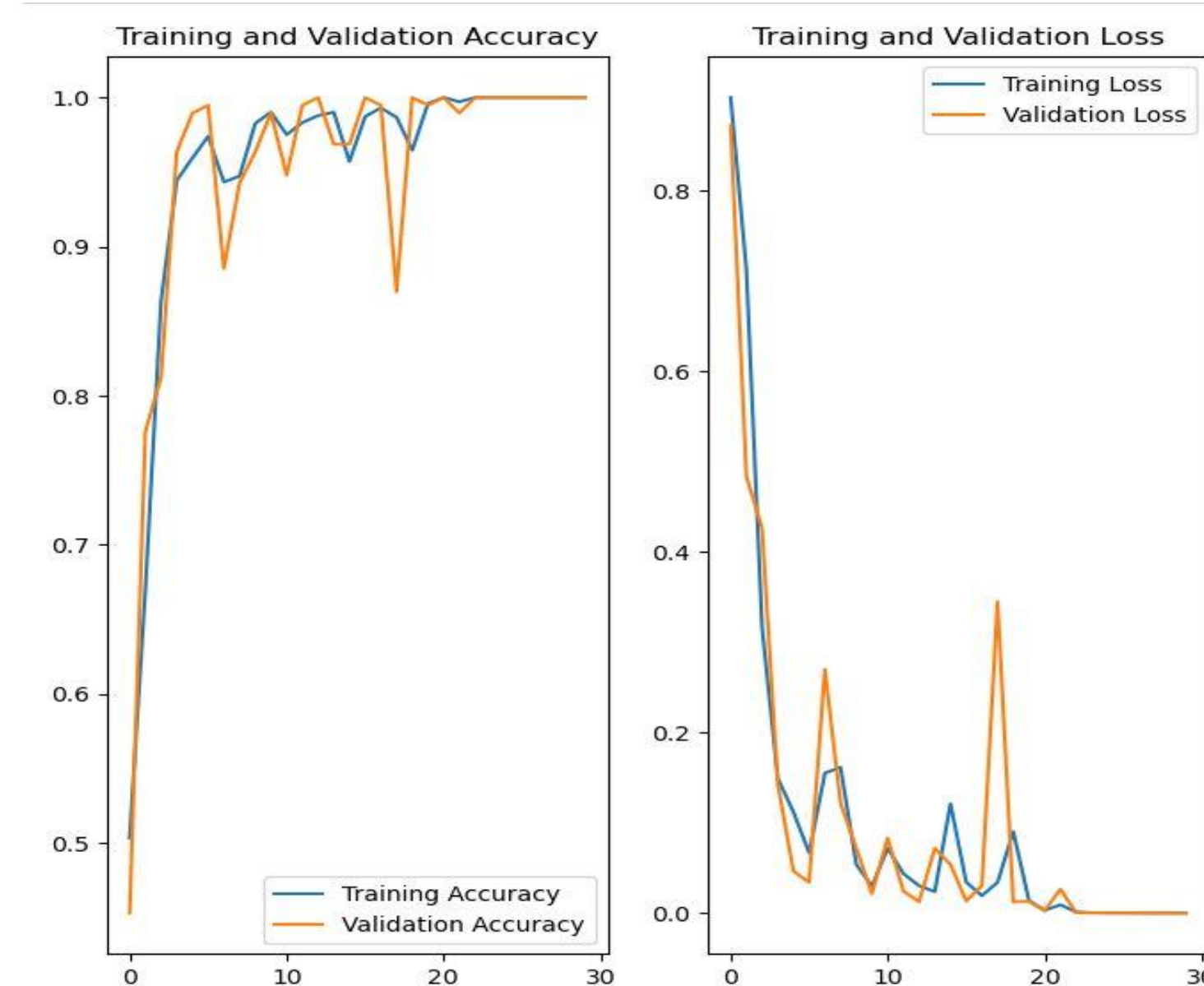
Flow Diagram



Tools Used



Accuracy rate- 99%, 30-epoch



URL : <https://potatoapp1.azurewebsites.net/>

References

- <https://www.datta-meghe-college-of-engineering-airoli-new-mumbai-maharashtra-india-students-computer-engineering-datta-meghe-college-of-engineering-airoli-new-mumbai-maharashtra-india-2022-plant-disease-detection-using-convolution-neural-network-cnn-international-research-journal-of-engineering-and-technology-irjet-0905-1309>
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- <https://www.kaggle.com/datasets/arjuntejaswi/plant-village>