



# Potato Disease Classification



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# Problem Statement

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Farmers who grows potatoes are facing lot of economic losses every year because of various diseases that can happen to a potato plant. There are two common diseases known as early blight and late blight. If farmer can detect these diseases early and apply appropriate treatment then it can save lot of waste. The goal of this project to accurately identify those disease so that farmers can take step.

- ❖ Dataset - <https://www.kaggle.com/datasets/arjuntejaswi/plant-village>
- ❖ Data preprocessing
- ❖ Model Building
- ❖ Evaluation

# Result

54/54 [=====] - 73s 1s/step - loss: 0.0294 - accuracy: 0.9890 - val\_loss: 0.0323 - val\_accuracy: 0.9896

Epoch 46/50

54/54 [=====] - 72s 1s/step - loss: 0.0348 - accuracy: 0.9896 - val\_loss: 0.0541 - val\_accuracy: 0.9844

Epoch 47/50

54/54 [=====] - 73s 1s/step - loss: 0.0204 - accuracy: 0.9931 - val\_loss: 0.0649 - val\_accuracy: 0.9792

Epoch 48/50

54/54 [=====] - 74s 1s/step - loss: 0.0228 - accuracy: 0.9936 - val\_loss: 0.0681 - val\_accuracy: 0.9688

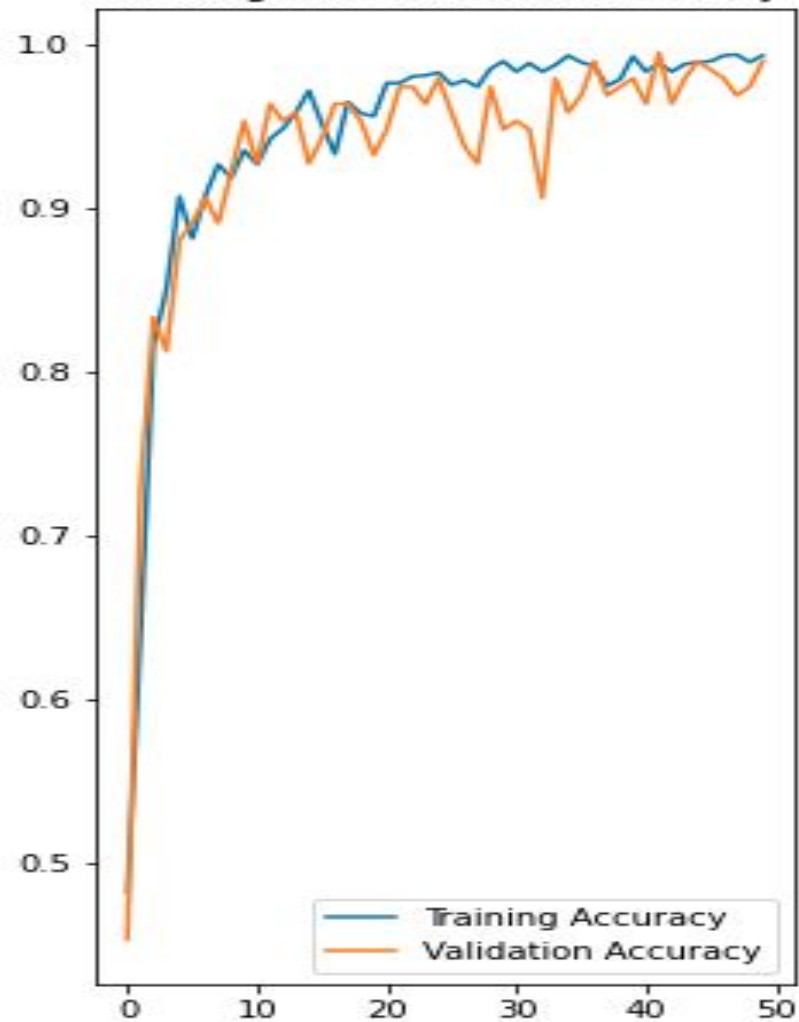
Epoch 49/50

54/54 [=====] - 72s 1s/step - loss: 0.0368 - accuracy: 0.9890 - val\_loss: 0.0873 - val\_accuracy: 0.9740

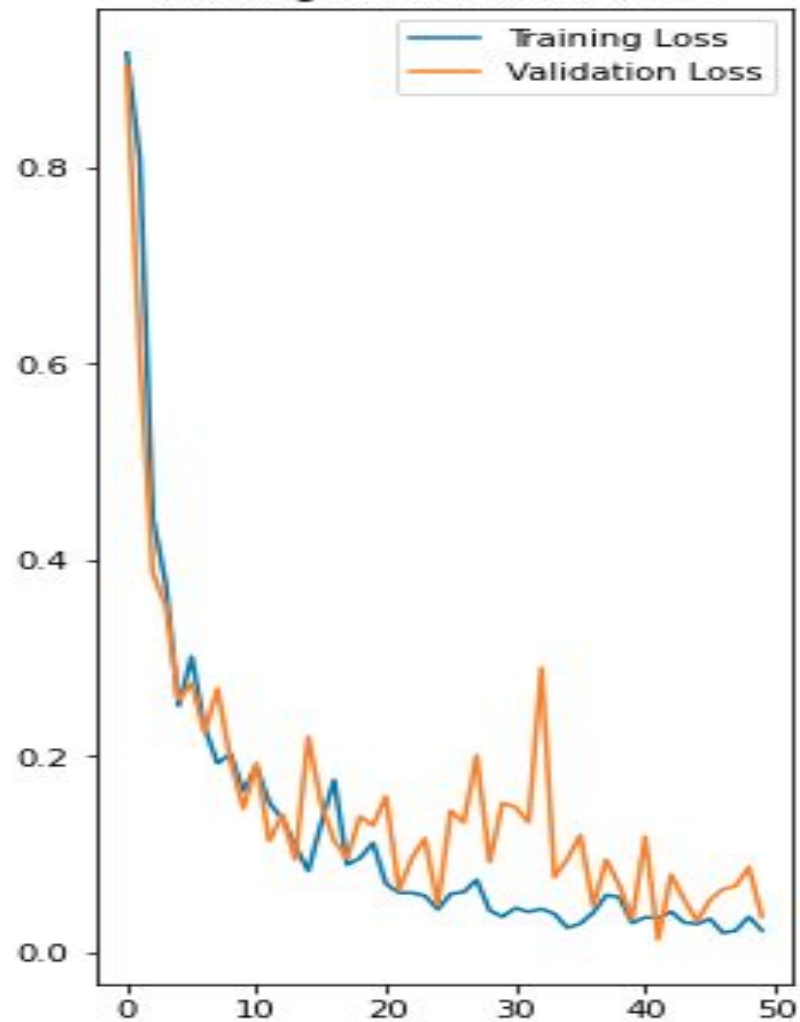
Epoch 50/50

54/54 [=====] - 73s 1s/step - loss: 0.0229 - accuracy: 0.9931 - val\_loss: 0.0368 - val\_accuracy: 0.9896

### Training and Validation Accuracy



### Training and Validation Loss





Actual: Potato\_\_healthy,  
Predicted: Potato\_\_healthy.  
Confidence: 98.21%



Actual: Potato\_\_Early\_blight,  
Predicted: Potato\_\_Early\_blight.  
Confidence: 100.0%



Actual: Potato\_\_Late\_blight,  
Predicted: Potato\_\_Late\_blight.  
Confidence: 100.0%

