IMAGE PROCESSING

PLANT DISEASE IDENTIFICATION

In this project we aim to identify the category of foliar disease in the leaves of apple trees. Primarily, we aim to identify whether a leaf belong to healthy, multiple-diseased, scab or rust category, using Image Processing and Machine Learning.

Course Instructor : **Dr. Pritee Khanna**

Presented By :
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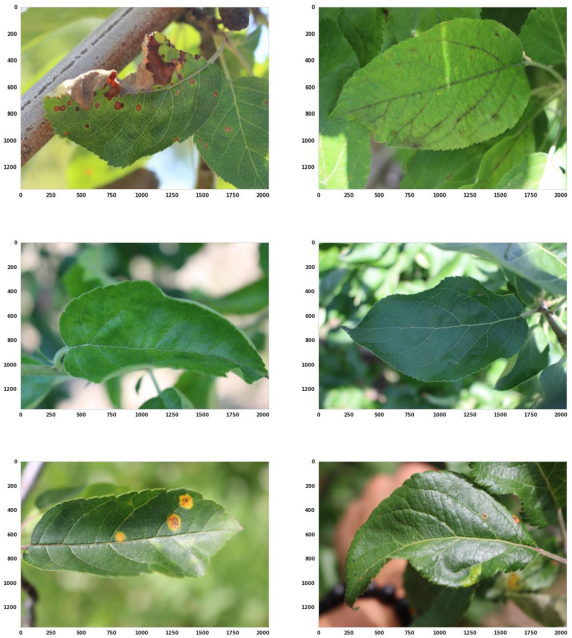
Mukul Mishra - 2017334

Data set acquisition



Exploratory Data Analysis

Analyzing mean values of each color channel

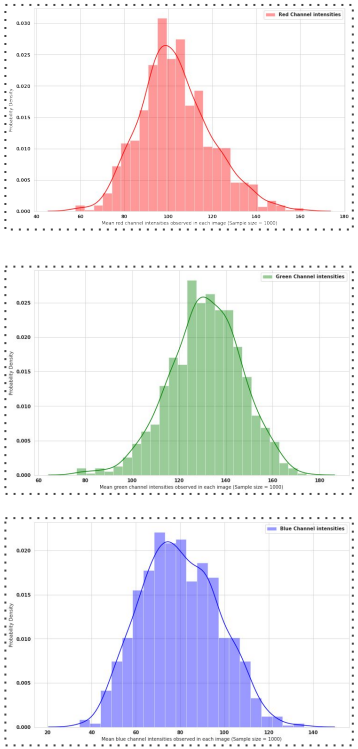


Image Processing I

Image deNoising -> Sobel Filtering-> Canny Edge Image

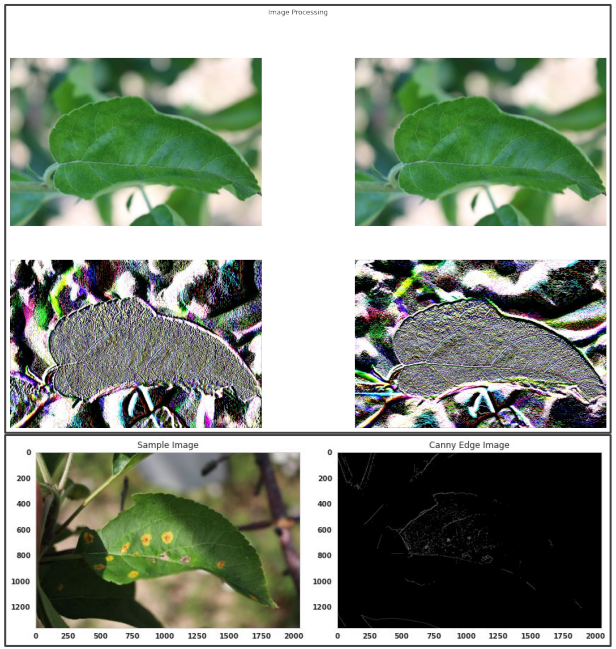
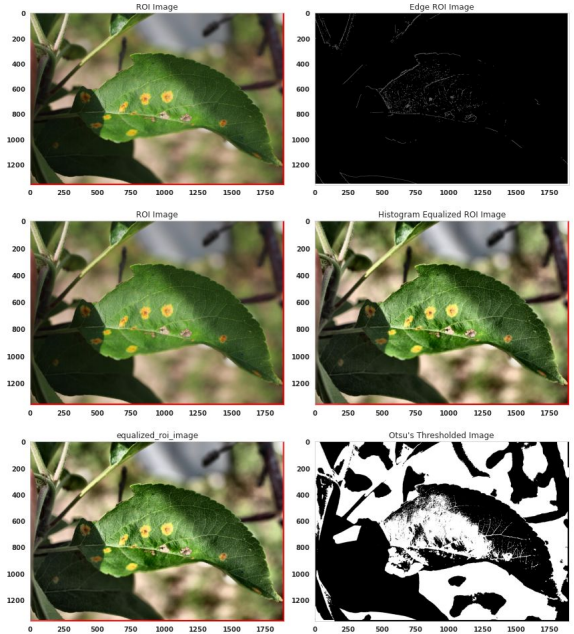


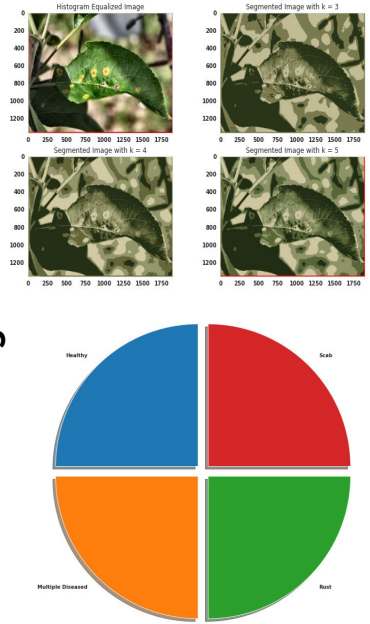
Image Processing II

Image Processing III & Dataset prep

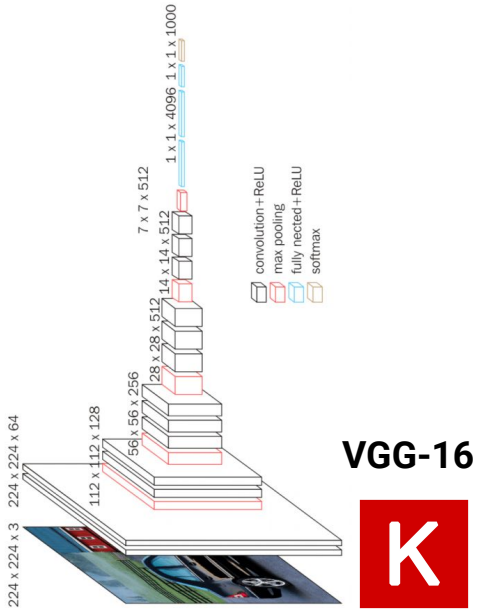
Deep Learning With Keras framework



ROI Image -> Histogram Equalized Image-> Otsu's Segmentation

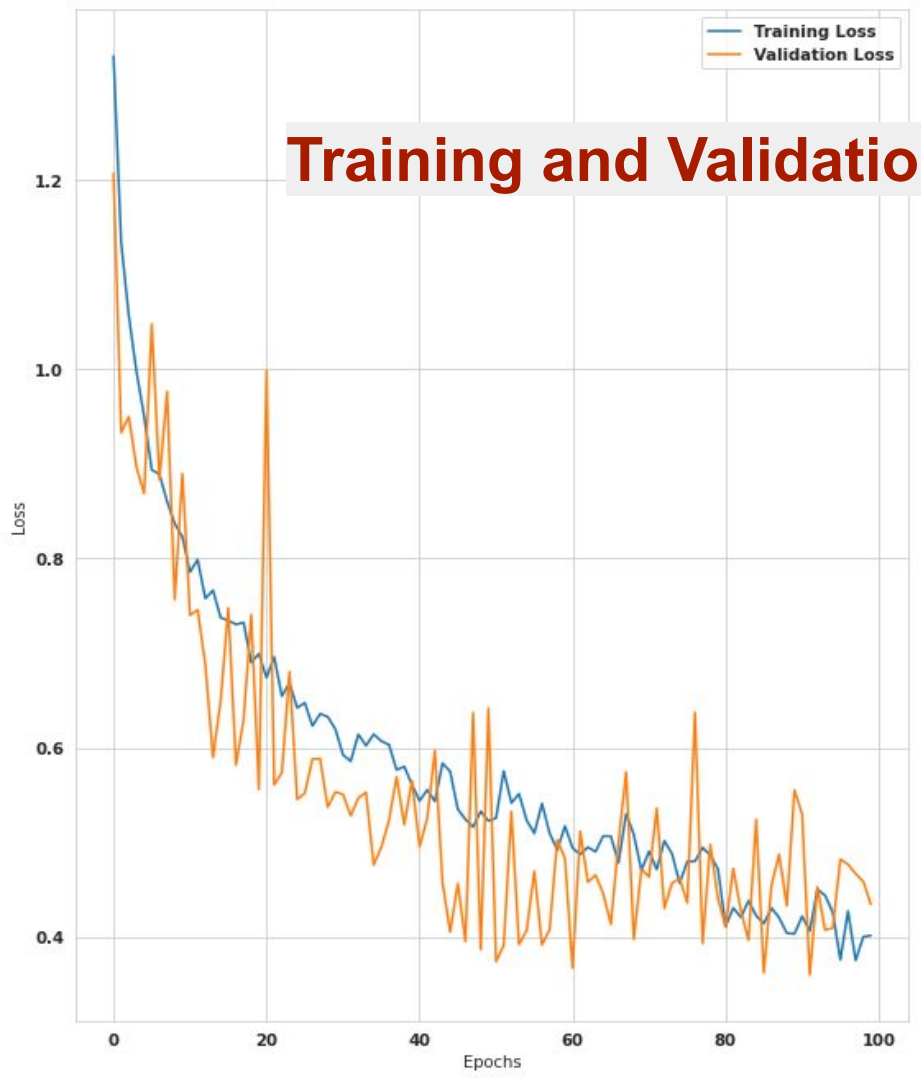


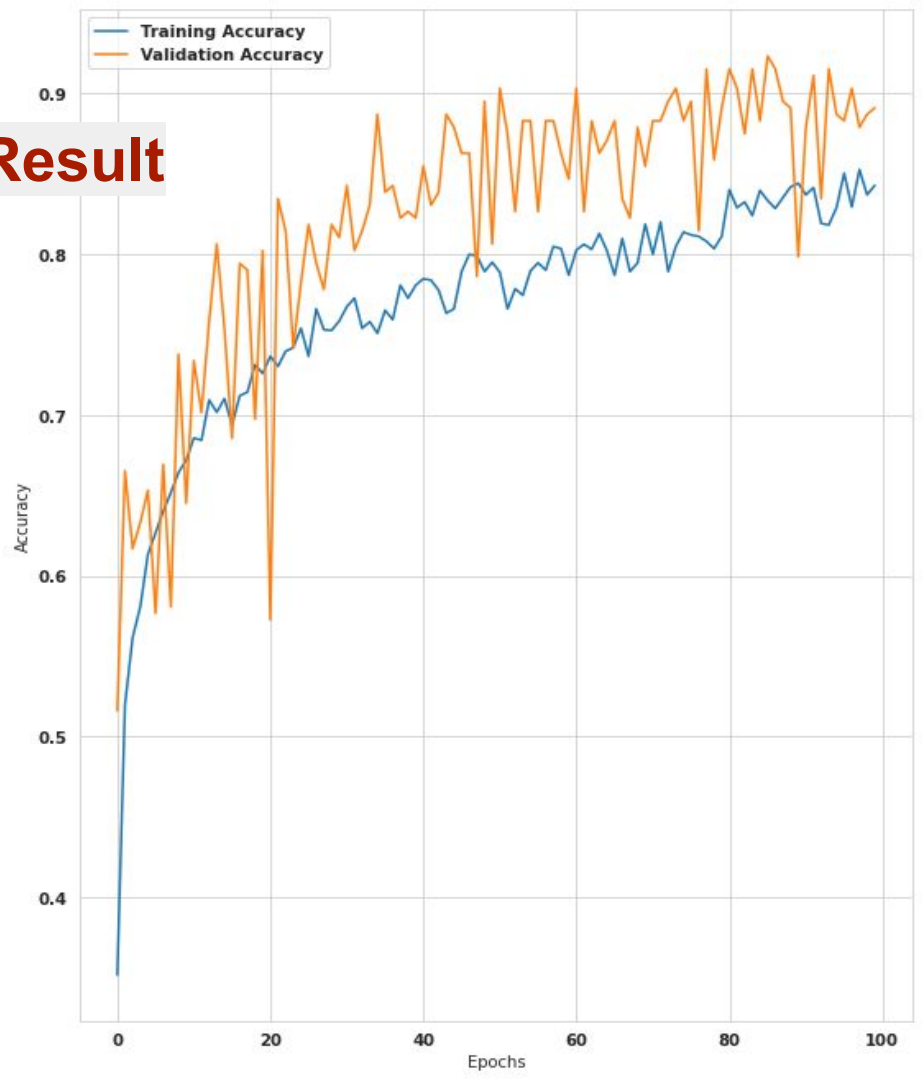
K-means Segmentation -> SMOTE Imbalance handling-> Deep Learning Model



VGG-16

Training and Validation Result





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Label of first testing image Rust
Label of first testing image Scab
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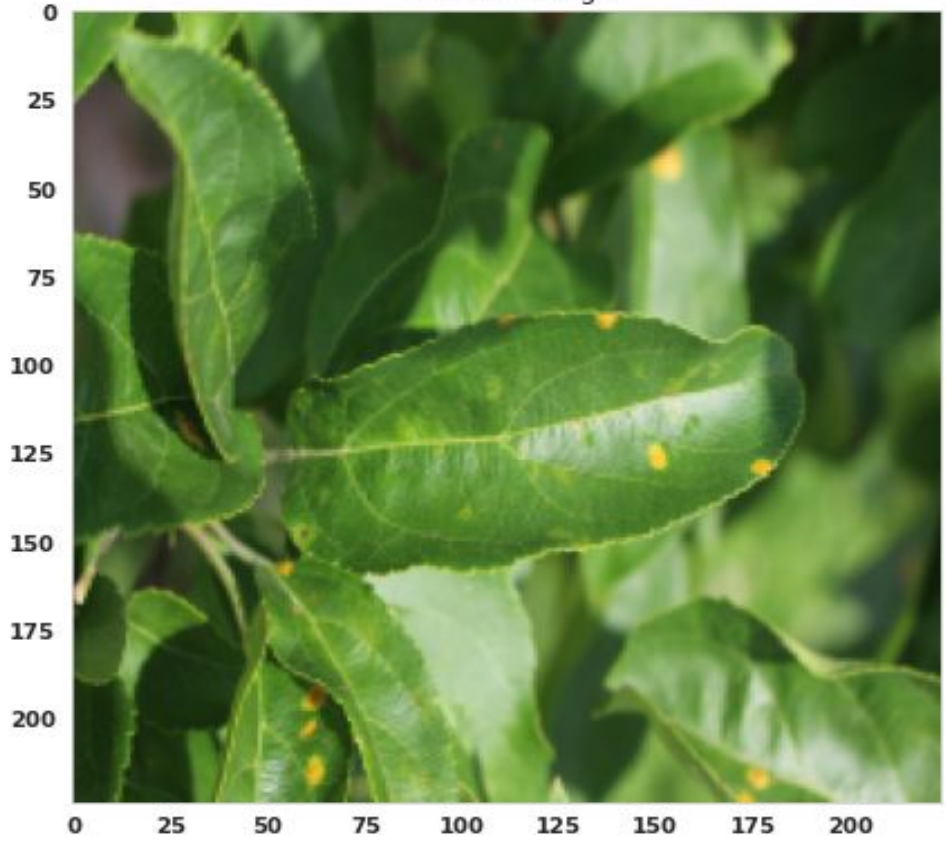
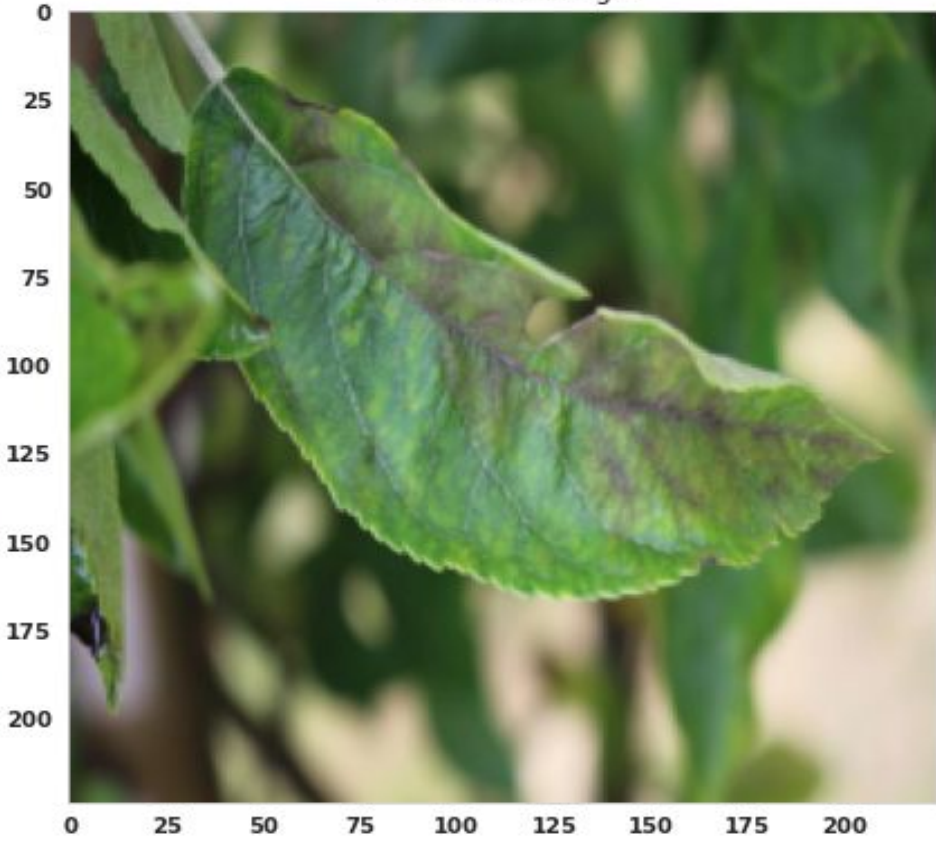
CLASSIFICATION DONE

First Test Image



Second Test Image



Thank You!