Rice Leaf Disease Detection using Simple CNN

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Diseases

9 Classes with 1426 files

Model Building

Simple Convolutional Neural Network (CNN)

Frame Work

Tensor Flow

Dataset

Dataset

The data set contains 1426 images including nine kinds of Rice leaf diseases

Simple CNN

According to paper

Convolution Layer : 5

Dense Layer : 3(including output layer)

Constants

Number of Class : 9

Number of Data : 1426

Batch Size :24

Epoch : 12 (in 17 classes)

Epoch : 20 (in 9 classes)

Step Size : 48

Image Size : 224 X 224

Two Stage Training

1.9 classes are divided into 17 classes according to Paper

2. Dense layer has 17 neurons(nodes) with softmax activation function

3. Fitting the model

4. In the 2nd stage original dataset is used (9 classes)

5. **Popping** the last dense layer of 17 class dataset and **adding** dense layer of 9 class dataset

6. Finally fit the model

Train Accuracy

Accuracy - 0.82

Validation Accuracy

Validation accuracy : 0.754

Test Accuracy : 0.71