

Project Development Phase

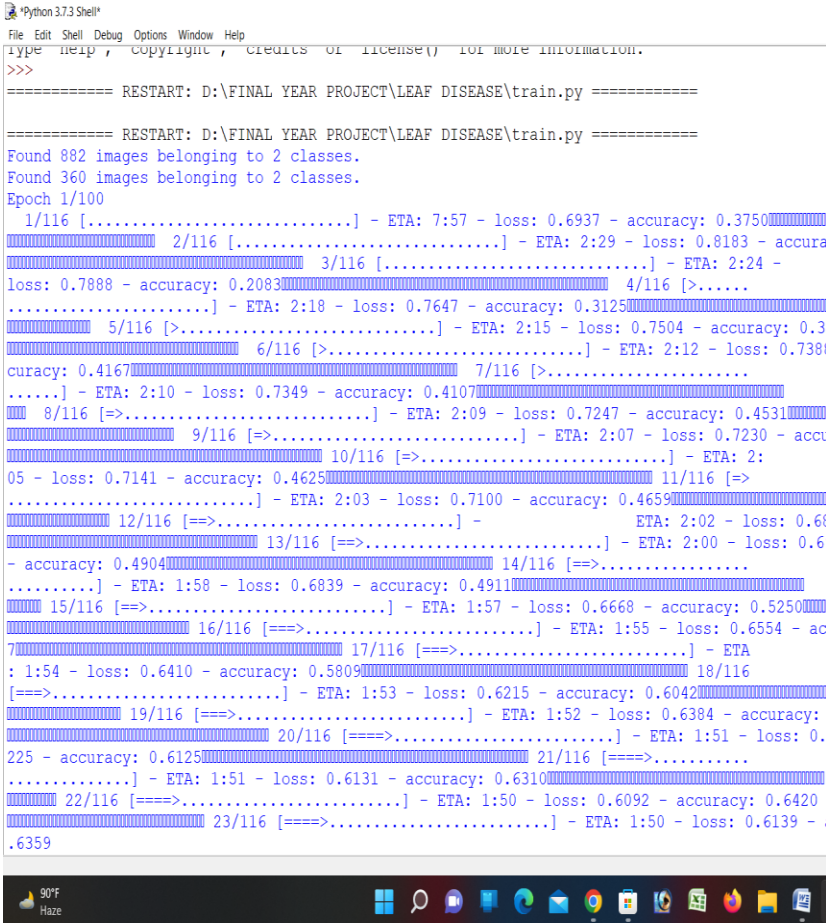
Model Performance Test

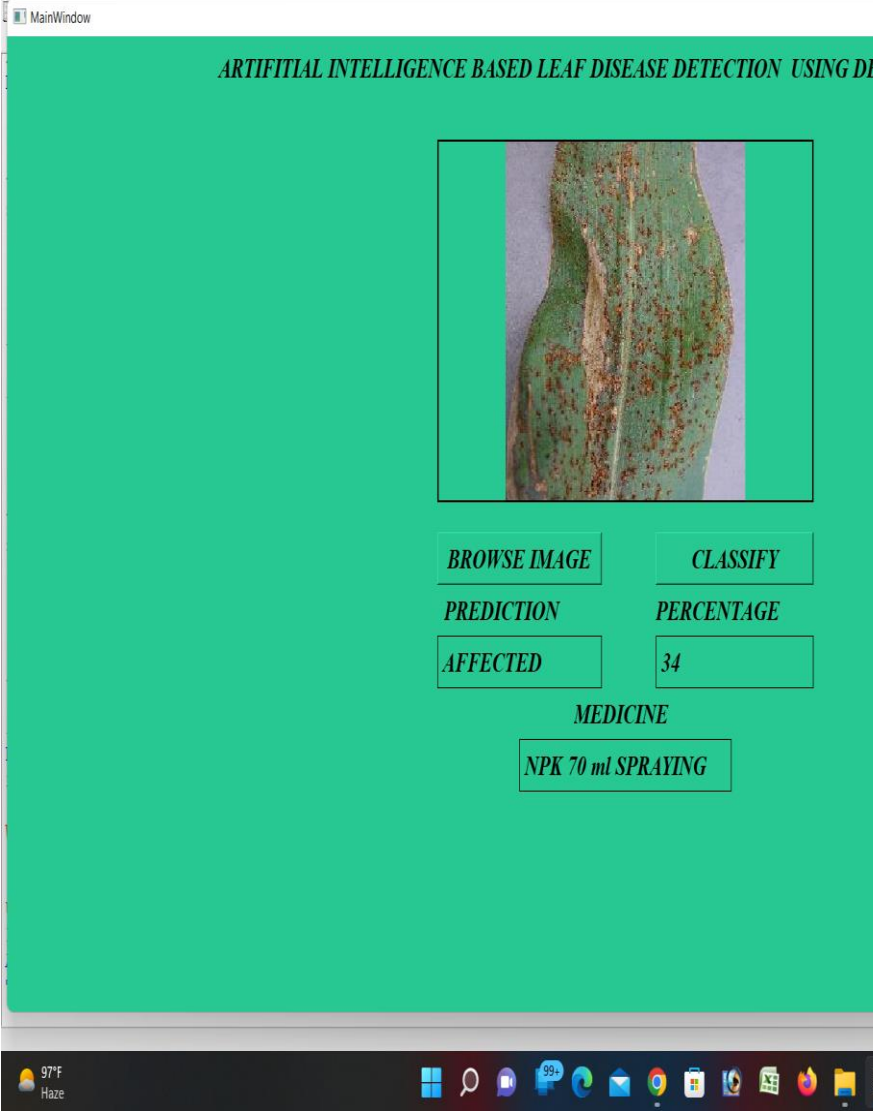
Date	18 November 2022
Team ID	PNT2022TMID42096
Project Name	Fertilizers Recommendation system for disease Prediction
Maximum Marks	10 Marks

Model Performance Testing:

Project team shall fill the following information in model performance testing template.

s.no.	parameter	values	screenshot																						
1.	Model summary	Total params: 1,572,768	model.summary() Model: "sequential"																						
		Trainable params: 1,572,768 Non-trainable params:0	<table><thead><tr><th>Layer (type)</th><th>Output Shape</th></tr></thead><tbody><tr><td>conv2d (Conv2D)</td><td>(None, 510, 510, 16)</td></tr><tr><td>max_pooling2d (MaxPooling2D)</td><td>(None, 255, 255, 16)</td></tr><tr><td>conv2d_1 (Conv2D)</td><td>(None, 253, 253, 32)</td></tr><tr><td>max_pooling2d_1 (MaxPooling 2D)</td><td>(None, 126, 126, 32)</td></tr><tr><td>conv2d_2 (Conv2D)</td><td>(None, 124, 124, 64)</td></tr><tr><td>max_pooling2d_2 (MaxPooling 2D)</td><td>(None, 62, 62, 64)</td></tr><tr><td>conv2d_3 (Conv2D)</td><td>(None, 60, 60, 128)</td></tr><tr><td>max_pooling2d_3 (MaxPooling 2D)</td><td>(None, 30, 30, 128)</td></tr><tr><td>conv2d_4 (Conv2D)</td><td>(None, 28, 28, 256)</td></tr><tr><td>max_pooling2d_4 (MaxPooling 2D)</td><td>(None, 14, 14, 256)</td></tr></tbody></table>	Layer (type)	Output Shape	conv2d (Conv2D)	(None, 510, 510, 16)	max_pooling2d (MaxPooling2D)	(None, 255, 255, 16)	conv2d_1 (Conv2D)	(None, 253, 253, 32)	max_pooling2d_1 (MaxPooling 2D)	(None, 126, 126, 32)	conv2d_2 (Conv2D)	(None, 124, 124, 64)	max_pooling2d_2 (MaxPooling 2D)	(None, 62, 62, 64)	conv2d_3 (Conv2D)	(None, 60, 60, 128)	max_pooling2d_3 (MaxPooling 2D)	(None, 30, 30, 128)	conv2d_4 (Conv2D)	(None, 28, 28, 256)	max_pooling2d_4 (MaxPooling 2D)	(None, 14, 14, 256)
			Layer (type)	Output Shape																					
			conv2d (Conv2D)	(None, 510, 510, 16)																					
			max_pooling2d (MaxPooling2D)	(None, 255, 255, 16)																					
			conv2d_1 (Conv2D)	(None, 253, 253, 32)																					
			max_pooling2d_1 (MaxPooling 2D)	(None, 126, 126, 32)																					
			conv2d_2 (Conv2D)	(None, 124, 124, 64)																					
			max_pooling2d_2 (MaxPooling 2D)	(None, 62, 62, 64)																					
			conv2d_3 (Conv2D)	(None, 60, 60, 128)																					
			max_pooling2d_3 (MaxPooling 2D)	(None, 30, 30, 128)																					
			conv2d_4 (Conv2D)	(None, 28, 28, 256)																					
			max_pooling2d_4 (MaxPooling 2D)	(None, 14, 14, 256)																					

			<div>conv2d_5 (Conv2D) (None, 12, 12, 512)</div> <div>max_pooling2d_5 (MaxPooling 2D) (None, 6, 6, 512)</div> <div>flatten (Flatten) (None, 18432)</div> <div>=====</div> <div>Total params: 1,572,768</div> <div>Trainable params: 1,572,768</div> <div>Non-trainable params: 0</div> <div>=====</div>
2.	Accuracy	Training Accuracy:64.20 Validation Accuracy:80	<div>Epoch 1/100</div> <div>111/116 [=====>..] - ETA: 11s - loss: 0.7071 - acc</div> <div>WARNING:tensorflow:Your input ran out of data; interrupting training. Make sure you have a dataset that can generate at least `steps_per_epoch * epochs` batches (in this case, 11600 batches).</div> <div>function when building your dataset.</div> <div>116/116 [=====] - 369s 3s/step - loss: 0.7071</div> <div>val_accuracy: 0.8000</div> <div><keras.callbacks.History at 0x7ff1d8e88590></div> <div></div>

3.	Confidence Score (Only Yolo Projects)	Class Detected: 80% Confidence Score : 95%	

.

Model Summary:

model.summary()

Model: "sequential"

Layer (type)	Output Shape	Param #
conv2d (Conv2D)	(None, 510, 510, 16)	448
max_pooling2d (MaxPooling2D)	(None, 255, 255, 16)	0

)

conv2d_1 (Conv2D)	(None, 253, 253, 32)	4640
max_pooling2d_1 (MaxPooling 2D)	(None, 126, 126, 32)	0
conv2d_2 (Conv2D)	(None, 124, 124, 64)	18496
max_pooling2d_2 (MaxPooling 2D)	(None, 62, 62, 64)	0
conv2d_3 (Conv2D)	(None, 60, 60, 128)	73856
max_pooling2d_3 (MaxPooling 2D)	(None, 30, 30, 128)	0
conv2d_4 (Conv2D)	(None, 28, 28, 256)	295168
max_pooling2d_4 (MaxPooling 2D)	(None, 14, 14, 256)	0
conv2d_5 (Conv2D)	(None, 12, 12, 512)	1180160
max_pooling2d_5 (MaxPooling 2D)	(None, 6, 6, 512)	0
flatten (Flatten)	(None, 18432)	0

=====
Total params: 1,572,768

Trainable params: 1,572,768

Non-trainable params: 0


Accuracy:

```
*Python 3.7.3 Shell*
File Edit Shell Debug Options Window Help
type help , copyright , credits or license() for more information.
>>>
===== RESTART: D:\FINAL YEAR PROJECT\LEAF DISEASE\train.py =====
===== RESTART: D:\FINAL YEAR PROJECT\LEAF DISEASE\train.py =====
Found 882 images belonging to 2 classes.
Found 360 images belonging to 2 classes.
Epoch 1/100
 1/116 [.....] - ETA: 7:57 - loss: 0.6937 - accuracy: 0.3750
..... 2/116 [.....] - ETA: 2:29 - loss: 0.8183 - accuracy: 0.3125
..... 3/116 [.....] - ETA: 2:24 -
loss: 0.7888 - accuracy: 0.2083
..... 4/116 [>.....
.....] - ETA: 2:18 - loss: 0.7647 - accuracy: 0.3125
..... 5/116 [>.....] - ETA: 2:15 - loss: 0.7504 - accuracy: 0.3500
..... 6/116 [>.....] - ETA: 2:12 - loss: 0.7388 - ac
curacy: 0.4167
..... 7/116 [>.....
.....] - ETA: 2:10 - loss: 0.7349 - accuracy: 0.4107
..... 8/116 [=>.....] - ETA: 2:09 - loss: 0.7247 - accuracy: 0.4531
..... 9/116 [=>.....] - ETA: 2:07 - loss: 0.7230 - accuracy: 0.4444
..... 10/116 [=>.....] - ETA: 2:
05 - loss: 0.7141 - accuracy: 0.4625
..... 11/116 [=>
.....] - ETA: 2:03 - loss: 0.7100 - accuracy: 0.4659
..... 12/116 [==>.....] -
ETA: 2:02 - loss: 0.6843 - accuracy: 0.5000
..... 13/116 [==>.....] - ETA: 2:00 - loss: 0.6928
- accuracy: 0.4904
..... 14/116 [==>.....
.....] - ETA: 1:58 - loss: 0.6839 - accuracy: 0.4911
..... 15/116 [==>.....] - ETA: 1:57 - loss: 0.6668 - accuracy: 0.5250
..... 16/116 [==>.....] - ETA: 1:55 - loss: 0.6554 - accuracy: 0.554
7..... 17/116 [==>.....] - ETA
: 1:54 - loss: 0.6410 - accuracy: 0.5809
..... 18/116
[==>.....] - ETA: 1:53 - loss: 0.6215 - accuracy: 0.6042
..... 19/116 [==>.....] - ETA: 1:52 - loss: 0.6384 - accuracy: 0.5921
..... 20/116 [==>.....] - ETA: 1:51 - loss: 0.6
225 - accuracy: 0.6125
..... 21/116 [==>.....
.....] - ETA: 1:51 - loss: 0.6131 - accuracy: 0.6310
..... 22/116 [==>.....] - ETA: 1:50 - loss: 0.6092 - accuracy: 0.6420
..... 23/116 [==>.....] - ETA: 1:50 - loss: 0.6139 - accuracy: 0
.6359
Ln: 10 Col: 0
```

Confidence Score:

MainWindow

ARTIFITIAL INTELLIGENCE BASED LEAF DISEASE DETECTION USING DEEP LEARNING



BROWSE IMAGE

CLASSIFY

PREDICTION

PERCENTAGE


AFFECTED

34


MEDICINE

NPK 70 ml SPRAYING

97°F
Haze



ENG
IN



Ln: 7 Col: 0
5:18 PM
5/23/2022