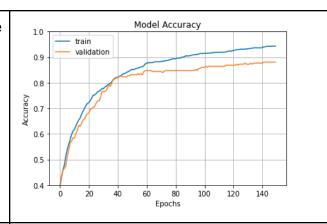
Model	Accuracy		
Efficientnet_b4 - for 4 classes(normal, rot, bloatch, scab)	C* 100% 8/8 [00:15<00:00, 1.93s/it] Test Loss: 0.6401390954852104 Test Acc: 0.7578125		
epochs =20 Ir = 0.001			
Efficientnet_b4 - for 4 classes(normal, rot, bloatch, scab)	100% 8/8 [00:01<00:00, 5.41il/s] Test Loss: 0.5483963638544083 Test Acc: 0.7734375		
epochs =200 Ir = 0.00001			
Efficientnet_b4 - for 2 classes(normal, defected)	<pre>[105] model.load_state_dict(torch.load('\frac{\chick(content/ColabPneumoniaModel.pt')}) model.eval() avg_test_loss, avg_test_acc = trainer.valid_batch_loop(model,testloader)</pre>		
epochs =250 Ir = 0.00001	print("Test Loss : {}".format(avg_test_loss)) print("Test Acc : {}".format(avg_test_acc)) 100% Test Loss : 0.3484538018703461 Test Acc : 0.8395832777023315		
Efficientnet_b4 - for 2 classes(normal, defected) - More data - merged data (2 classes + 4 classes)	Test Loss: 0.25881360076806126 Test Acc: 0.8918067216873169		
epochs =200 Ir = 0.00001			
Efficientnet_b4 - for 2 classes(normal, defected) - More data - merged data (2 classes + 4 classes)	Average accuracy: 100% 9/9 [00:02<00:00, 4.23i/s] Test Loss: 0.26860874477359986 Test Acc: 0.8993055820465088		
Increased Batch size to 32	Best Accuracy at epoch 167:		
epochs =200 Ir = 0.000005	Epoch : 167 Train Loss : 0.221962 Train Acc : 0.925123 Epoch : 167 Valid Loss : 0.280662 Valid Acc : 0.906250		
Efficientnet_b4 - for 2 classes(normal, defected) - More data - merged data (2 classes + 4 classes)	Average Accuracy: C		
Increased Batch size to 64	Best Accuracy at epoch 169:		
epochs =200 Ir = 0.000005	Epoch : 169 Train Loss : 0.250199 Train Acc : 0.906420 Epoch : 169 Valid Loss : 0.264553 Valid Acc : 0.918750		

Efficientnet b4 - for 2 Average accuracy: classes(normal, defected) - More 5/5 [00:01<00:00, 3.03it/s] data - merged data (2 classes + 4 Test Loss: 0.2485705479979515 Test Acc: 0.909375011920929 classes) Best Accuracy at epoch 336: Increased Batch size to 64 Epoch : 136 Train Loss : 0.191113 Train Acc : 0.927891 Epoch : 136 Valid Loss : 0.246882 Valid Acc : 0.912500 epochs =400 Ir = 0.000005Epoch 350/350 EfficientNetV2L-transfer-learning 31/31 [===========] - 10s 320ms/step - loss: 0.1893 -Dataset:accuracy: 0.9444 - val loss: 0.2980 apple_dataset_normal_and de val accuracy: 0.8848 fected with extra data for resnet only validation data Val accuracy = 88.48% Batch size: - 32 epochs = 350**Ir =** 0.000002 Epoch 500/500 EfficientNetV2L-transfer-learning - 10s 322ms/step - loss: 0.1043 -Dataset:accuracy: 0.9784 - val loss: 0.2767 apple dataset normal and de val accuracy: 0.8848 fected with extra_data_for_ resnet only validation data Val accuracy = 88.48% Batch size: - 32 Model Accuracy epochs = 5001.0 Ir = 0.000003 0.9 0.8 0.7 0.6 0.5 - train validation 0.4 200 300 500 Resnet-50 =] - 4s 117ms/step - loss: 0.1948 - accuracy: 0.9434 - val_loss: 0.3101 - val_accuracy: 0.8807 Val accuracy = 0.8807 Batch size = 32Epochs = 150Learning rate = 0.000001 Dataset ->

apple_dataset_normal_and_defecte d_with_extra_data_for_resnet_only _validation_data



Resnet-50

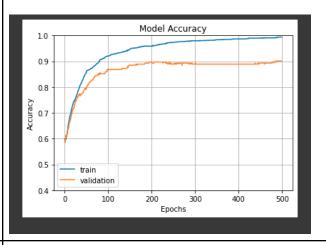
Batch_size = 32 Epochs = 500 Learning_rate = 0.000001

Dataset ->

apple_dataset_normal_and_defecte d_with_extra_data_for_resnet_only _validation_data Epoch 500/500
31/31 [============]
- 4s 118ms/step - loss: 0.0598 accuracy: 0.9938 - val_loss: 0.2697 val_accuracy: 0.9012

Training Accuracy: 99.38

Validation Accuracy: 90.12



** Resnet-50

Batch_size = 32 Epochs = 500 Learning rate = 0.000001

Dataset ->

apple_dataset_normal_and_defecte d_with_extra_data_for_resnet_only _validation_data

Dataset link →

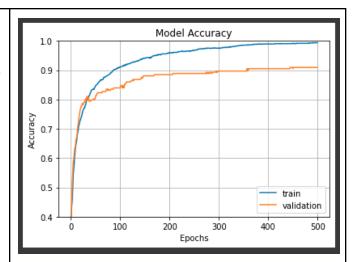
https://drive.google.com/drive/folder s/1NlmW5 Vja29hoDbwE0AxnfaR M4T2wQG-?usp=sharing

Trained RestNet-50 model link →

https://drive.google.com/drive/folders/193lKkplTwwEWv_5RanUPVnuzYvR83qCL?usp=sharing

Loading this model:-

"/content/drive/MyDrive/CMPE-295-A/my_resnet_model"



Training Accuracy: 99.38

Validation Accuracy: 90.95

[116] print(classif	ication_repo	rt(labels	, prediction	ons, target_n	ames=classnames))
	precision	recall	fl-score	support	
DEFECTED NORMAL	0.95 0.85	0.91 0.91	0.93 0.88	157 86	
accuracy macro avg weighted avg	0.90 0.91	0.91 0.91	0.91 0.90 0.91	243 243 243	

Resnet-50

Batch_size = 32 Epochs = 500 Learning_rate = 0.000001

Dataset ->

/content/drive/MyDrive/CMPE
-295-A/apple_dataset_normal
_and_defected_with_extra_da
ta_for_resnet_only_validati
on_data_more_data_added

Training Accuracy: 100%

Validation Accuracy: 97%

The model was trained wrong because dataset has repeated images and hence images were repeating training set and validation set.

Can be improved but will look into it after 14th.

** Work on dataset