

CS 4372 Assignment 3 Output

History Plots:

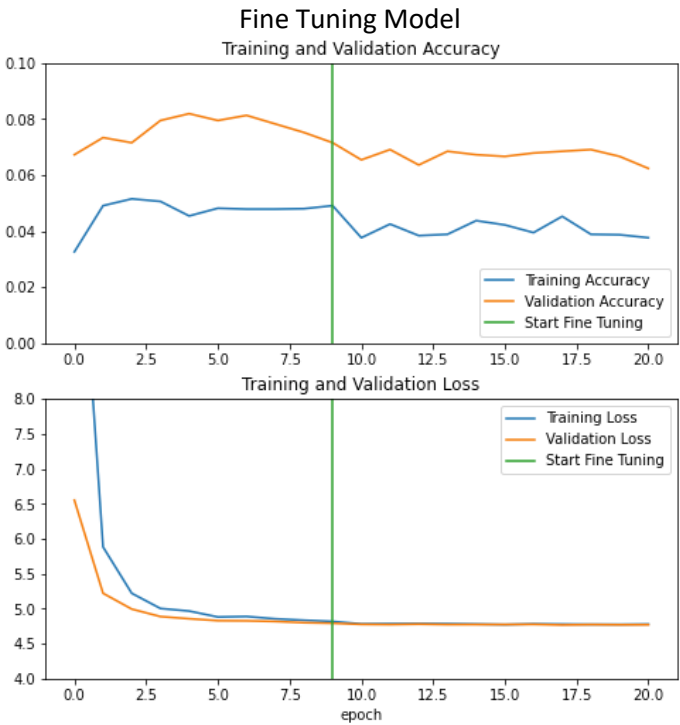
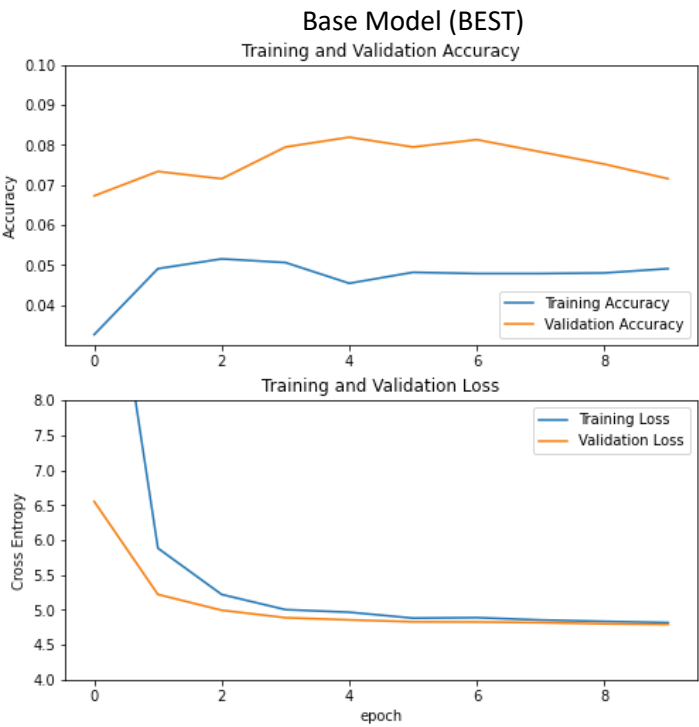


Image Prediction Plots:

Actual:pug
Prediction:affenpinscher



Actual:japanese_spaniel
Prediction:affenpinscher



Actual:otterhound
Prediction:affenpinscher



Actual:cairn
Prediction:affenpinscher



Actual:bluetick
Prediction:affenpinscher



Actual:maltese_dog
Prediction:affenpinscher



Actual:mexican_hairless
Prediction:affenpinscher



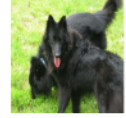
Actual:norfolk_terrier
Prediction:affenpinscher



Actual:kerry_blue_terrier
Prediction:affenpinscher



Actual:groenendael
Prediction:affenpinscher



Actual:pomeranian
Prediction:affenpinscher



Actual:tibetan_terrier
Prediction:affenpinscher



Actual:boston_bull
Prediction:affenpinscher



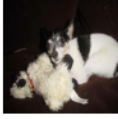
Actual:irish_wolfhound
Prediction:affenpinscher



Actual:soft-coated_wheaten_terrier
Prediction:affenpinscher



Actual:toy_terrier
Prediction:affenpinscher



Actual:rhodesian_ridgeback
Prediction:affenpinscher



Actual:labrador_retriever
Prediction:affenpinscher



Actual:bouvier_des_flandres
Prediction:affenpinscher



Actual:weimaraner
Prediction:affenpinscher



Actual:sussex_spaniel
Prediction:affenpinscher



Actual:boxer
Prediction:affenpinscher



Actual:dhole
Prediction:affenpinscher



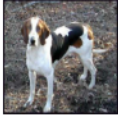
Actual:otterhound
Prediction:affenpinscher



Actual:collie
Prediction:affenpinscher



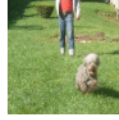
Actual:english_foxhound
Prediction:affenpinscher



Actual:english_foxhound
Prediction:affenpinscher



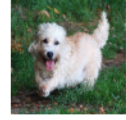
Actual:miniature_poodle
Prediction:affenpinscher



Actual:keeshond
Prediction:affenpinscher



Actual:dandie_dinmont
Prediction:affenpinscher



Parameter Testing/Tuning

Iteration	Parameters	Training and Test Accuray
1.	Optimizer = adam Learning rate = 0.0001 Epochs = 10	Training = 0.0491 Testing = 0.0716
2.	Optimizer = adam Learning rate = 0.0001 Epochs = 20	Training = 0.0376 Testing = 0.0582
3.	Optimizer = adam Learning rate = 0.0001 Epochs = 15	Training = 0.0075 Testing = 0.0093
4.	Optimizer = nadam Learning rate = 0.0001 Epochs = 10	Training = 0.0093 Testing = 0.0093
5.	Optimizer = ftrl Learning rate = 0.0001 Epochs = 10	Training = 0.0083 Testing = 0.0088
6.	Optimizer = adam Learning rate = 0.0005 Epochs = 10	Training = 0.0083 Testing = 0.0088
7.	Optimizer = adam Learning rate = 0.002 Epochs = 10	Training = 0.0083 Testing = 0.008
8.	Optimizer = adam Learning rate = 0.04 Epochs = 10	Training = 0.0083 Testing = 0.0088

- We saw that 10 epochs had the best accuracy, so we proceeded for further experiments with epochs = 10
- We saw that ___ as the optimizer had the best accuracy, so we proceeded for further experiments with optimizer =
- We saw that ___ as the learning rate had the best accuracy, so we proceeded with learning rate =
- Our best set of parameters was optimizer = adam, learning rate = 0.001, epochs = 10