

Model Development Phase Template

Date	19 March 2024
Team ID	SWTID1720165000
Project Title	CovidVision: Advanced COVID-19 Detection From Lung X-Rays With Deep Learning
Maximum Marks	10 Marks

Initial Model Training Code, Model Validation and Evaluation Report

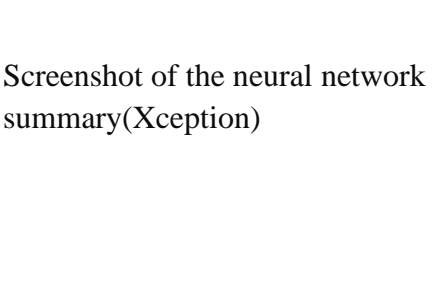
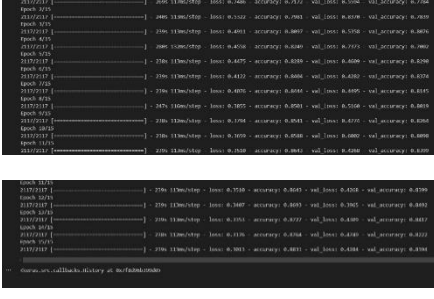
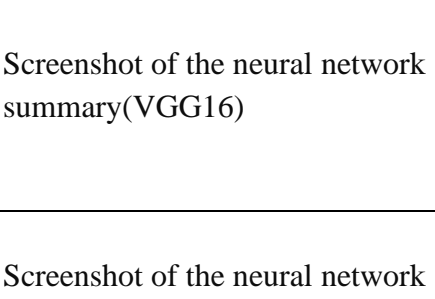
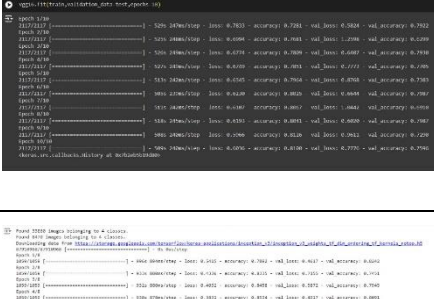
The initial model training code will be showcased in the future through a screenshot. The model validation and evaluation report will include a summary and training and validation performance metrics for multiple models, presented through respective screenshots.

Initial Model Training Code (5 marks):

Paste the screenshot of the model training code

Model Validation and Evaluation Report (5 marks):

Model	Summary	Training and Validation Performance Metrics
Model 1	Screenshot of the neural network summary (EfficientNetB0)	<pre> from tensorflow.keras import models model = F1() train_generator, specimens, validation_data=validation_generator Found 31808 images belonging to 4 classes. Found 8438 images belonging to 4 classes. Downloading data from https://storage.googleapis.com/keras-applications/efficientnetb0_notop.h5 15760384/15760384 [-----] - 5s 80s/step Epoch 1/50 1000/1000 [-----] - 60s 534ms/step - loss: 0.6033 - accuracy: 0.7612 - val_loss: 1.8641 - val_accuracy: 0.1711 Epoch 2/50 1000/1000 [-----] - 572s 548ms/step - loss: 0.4765 - accuracy: 0.8136 - val_loss: 1.4136 - val_accuracy: 0.2951 Epoch 3/50 1000/1000 [-----] - 576s 548ms/step - loss: 0.4297 - accuracy: 0.8331 - val_loss: 0.982108 - val_accuracy: 0.3418 Epoch 4/50 1000/1000 [-----] - 572s 548ms/step - loss: 0.4124 - accuracy: 0.8373 - val_loss: 22.8170 - val_accuracy: 0.3058 Epoch 5/50 1000/1000 [-----] - 568s 536ms/step - loss: 0.3884 - accuracy: 0.8478 - val_loss: 2.7893 - val_accuracy: 0.2889 Epoch 6/50 1000/1000 [-----] - 568s 537ms/step - loss: 0.3714 - accuracy: 0.8568 - val_loss: 3.1180 - val_accuracy: 0.1721 Epoch 7/50 1000/1000 [-----] - 572s 548ms/step - loss: 0.3557 - accuracy: 0.8608 - val_loss: 1.9638 - val_accuracy: 0.1721 Epoch 8/50 1000/1000 [-----] - 565s 538ms/step - loss: 0.3413 - accuracy: 0.8664 - val_loss: 4.8615 - val_accuracy: 0.1710 Epoch 9/50 1000/1000 [-----] - 580s 554ms/step - loss: 0.3288 - accuracy: 0.8722 - val_loss: 0.1180 - val_accuracy: 0.2784 Epoch 10/50 1000/1000 [-----] - 568s 536ms/step - loss: 0.3215 - accuracy: 0.8752 - val_loss: 564.4289 - val_accuracy: 0.4500 keras.callbacks.History at 0x2a1168800 </pre>

Model 2	<p>Screenshot of the neural network summary(Xception)</p> 	
Model 3	<p>Screenshot of the neural network summary(VGG16)</p> 	
Model 4	<p>Screenshot of the neural network summary(Inception)</p> 