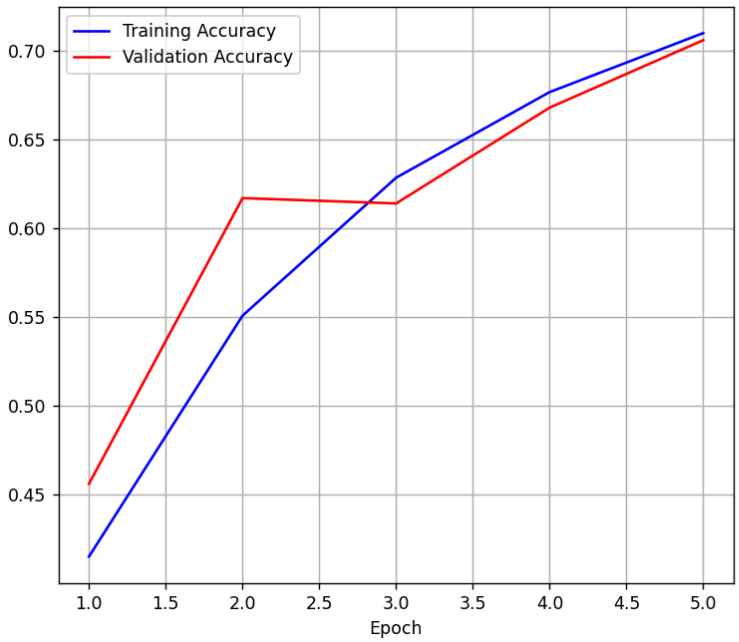
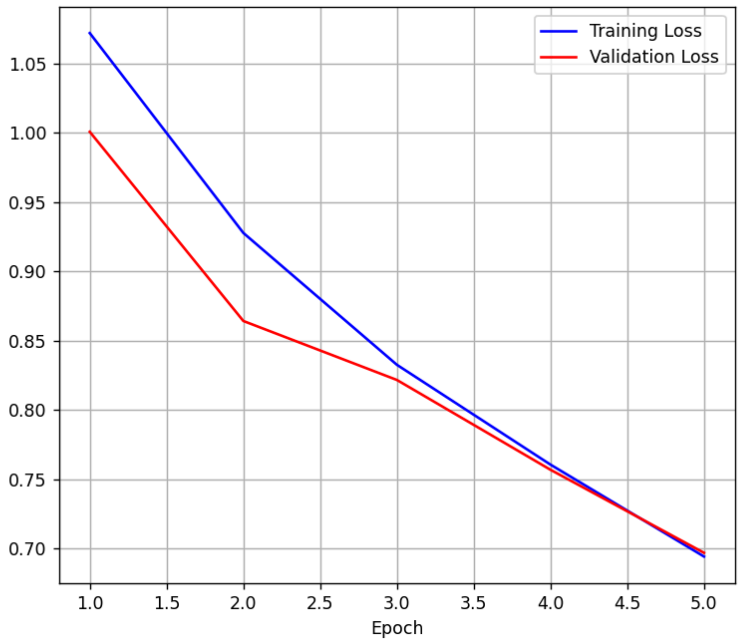
Explanation of hyperparameter changes:

1) I added one more convolutional layer with the number of filters in the 4th line set as “64.”
2) Next, in the fully connected layer, I bumped up the number of neurons in the density layer from 15 to 39.

By increasing the number of filters with the 4th layer added, it helped the accuracy because it is forced to parse through more data. It also spread out the data into 4 vessels versus 3. Because of this, I needed to add more density layer neurons to bring the parameters back up to close to 150,000. This is because of the 4th layer added, which is mentioned above, as it makes the whole system more efficient.

```
Epoch 1/5
32/32 [==============================] - 15s 441ms/step - loss: 1.0721 - accuracy: 0.4150 - val_loss: 1.0009 - val_accuracy: 0.4560
Epoch 2/5
32/32 [==============================] - 13s 406ms/step - loss: 0.9279 - accuracy: 0.5508 - val_loss: 0.8644 - val_accuracy: 0.6170
Epoch 3/5
32/32 [==============================] - 13s 410ms/step - loss: 0.8328 - accuracy: 0.6285 - val_loss: 0.8218 - val_accuracy: 0.6140
Epoch 4/5
32/32 [==============================] - 13s 410ms/step - loss: 0.7607 - accuracy: 0.6768 - val_loss: 0.7570 - val_accuracy: 0.6680
Epoch 5/5
32/32 [==============================] - 13s 403ms/step - loss: 0.6944 - accuracy: 0.7100 - val_loss: 0.6971 - val_accuracy: 0.7060
* Evaluating basic_model
30/30 [==============================] - 4s 135ms/step - loss: 0.6971 - accuracy: 0.7066
* Confusion Matrix for basic_model
30/30 [==============================] - 4s 134ms/step
[[1231  430  113]
 [ 219  899  115]
 [  80  169  582]]
```





```
Found 3838 files belonging to 3 classes.
* Training basic_model for 5 epochs
Model: "sequential"
_________________________________________________________________
 Layer (type)                Output Shape              Param #
=================================================================
 rescaling (Rescaling)       (None, 150, 150, 3)       0

 conv2d (Conv2D)             (None, 148, 148, 8)       224

 max_pooling2d (MaxPooling2D  (None, 74, 74, 8)        0
 )

 conv2d_1 (Conv2D)           (None, 72, 72, 16)        1168

 max_pooling2d_1 (MaxPooling  (None, 36, 36, 16)       0
 2D)

 conv2d_2 (Conv2D)           (None, 34, 34, 32)        4640

 max_pooling2d_2 (MaxPooling  (None, 17, 17, 32)       0
 2D)

 conv2d_3 (Conv2D)           (None, 15, 15, 64)        18496

 max_pooling2d_3 (MaxPooling  (None, 7, 7, 64)         0
 2D)

 flatten (Flatten)           (None, 3136)              0

 dense (Dense)               (None, 39)                122343

 dense_1 (Dense)             (None, 3)                 120

=================================================================
Total params: 146,991
Trainable params: 146,991
Non-trainable params: 0
```