```
Iteration 1:
Parameters:
  Number of layers = 158
  Dropout = 0.5
  Learning Rate = 0.001
  Optimizer = Adam
  Batch size = 32
  Epochs = 10
Training and Test Accuracy:
  Train = 90.71%
  Test = 94.49%
```
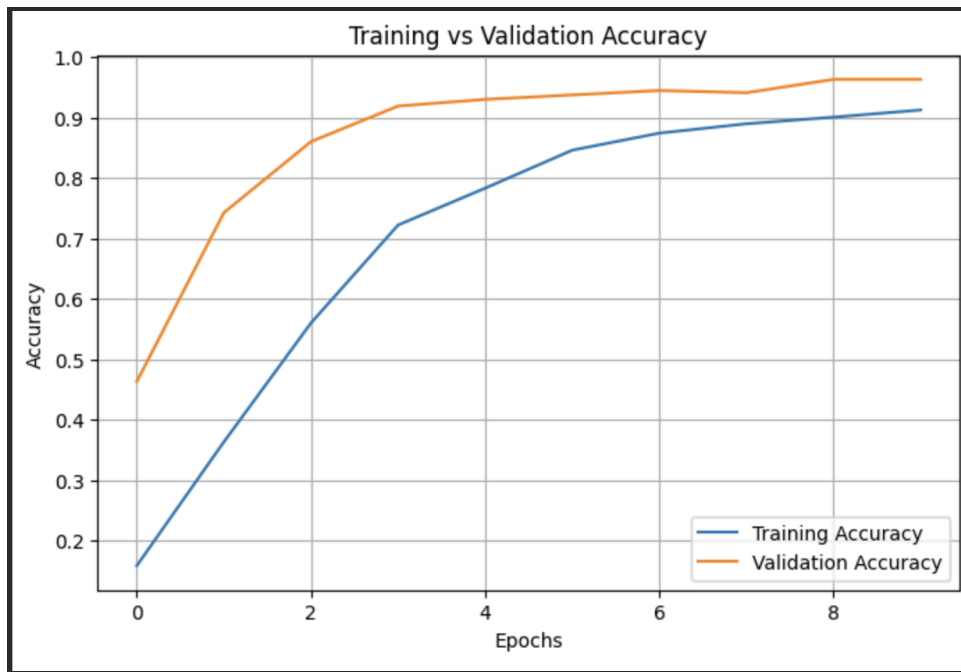
Training vs Validation Accuracy

```
Iteration 2:
Parameters:
  Number of layers = 158
  Dropout = 0.6
  Batch Size = 32
  Learning Rate = 0.0005
  Optimizer = Adam
  Epochs = 5
Training and Test Accuracy:
  Train = 92.62%
  Test = 95.96%
```

Training vs Validation Loss

Training vs Validation Accuracy
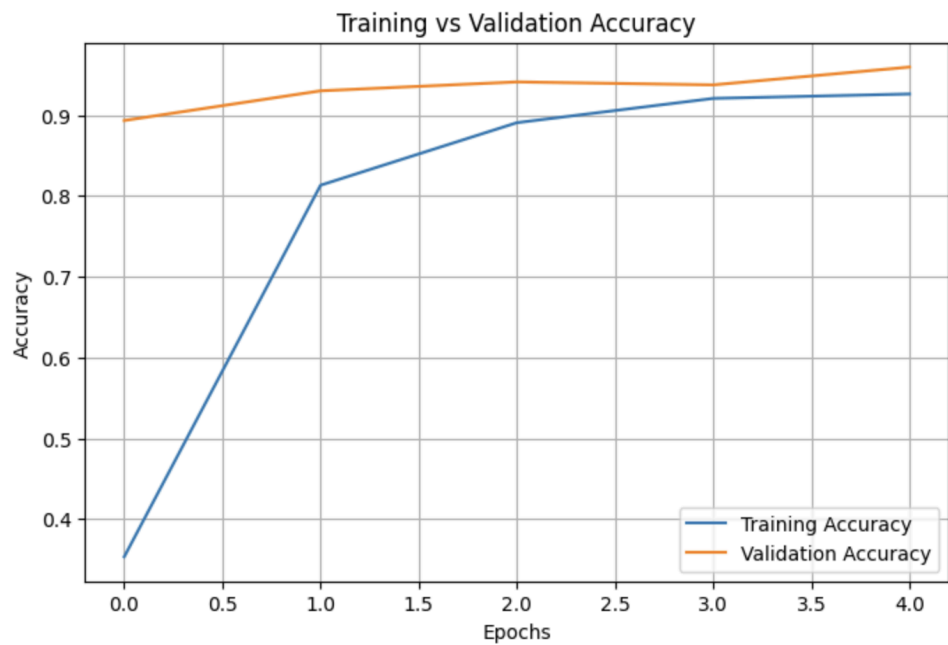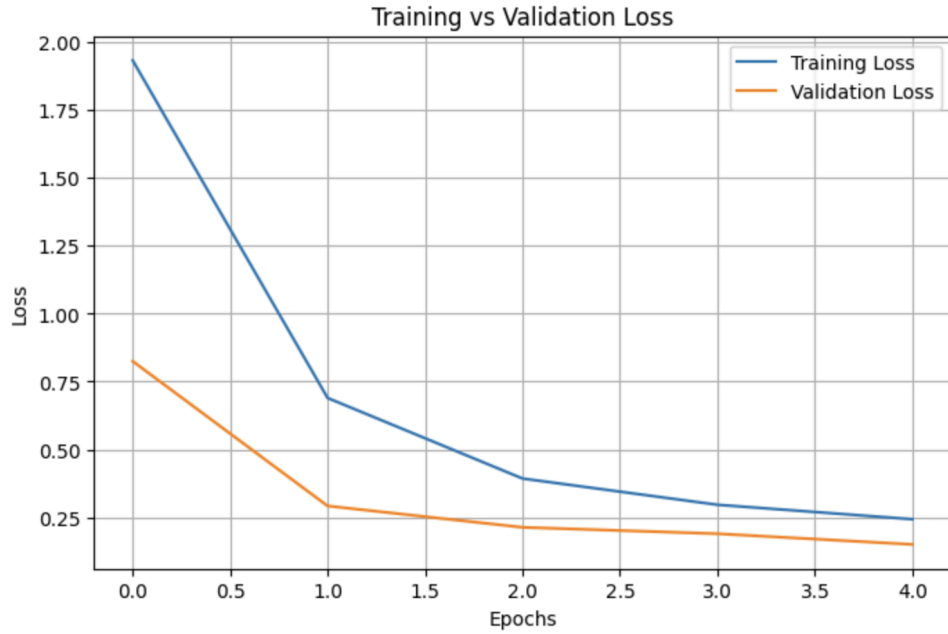

```
Iteration 3:
Parameters:
  Number of layers = 158
  Dropout = 0.4
  Learning Rate = 0.0001
  Batch Size = 32
  Optimizer = RMSprop
  Epochs = 5
Training and Test Accuracy:
  Train = 96.27%
```

Test = 97.43%

Training vs Validation Loss

Training vs Validation Accuracy
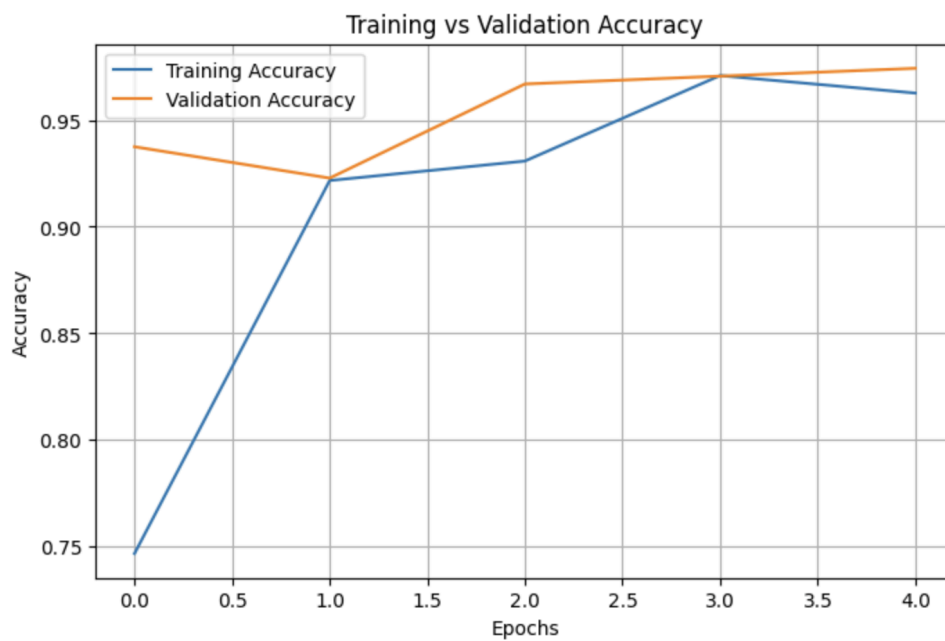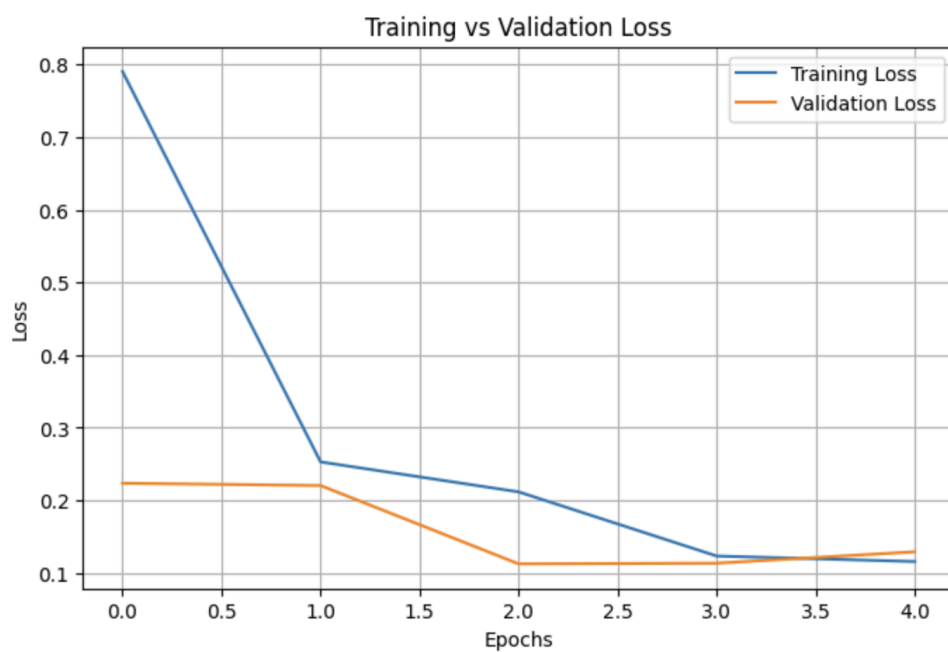
Iteration 4:
Parameters:
  Number of layers = 158
  Learning rate = 0.001
  Dropout = 0.4
  Batch size = 16
  Epochs = 10
  Optimizer = Adam

```
Training and Test Accuracy:
  Train = 98.91%
  Test = 96.69%
```


Training vs Validation Loss

Training vs Validation Accuracy
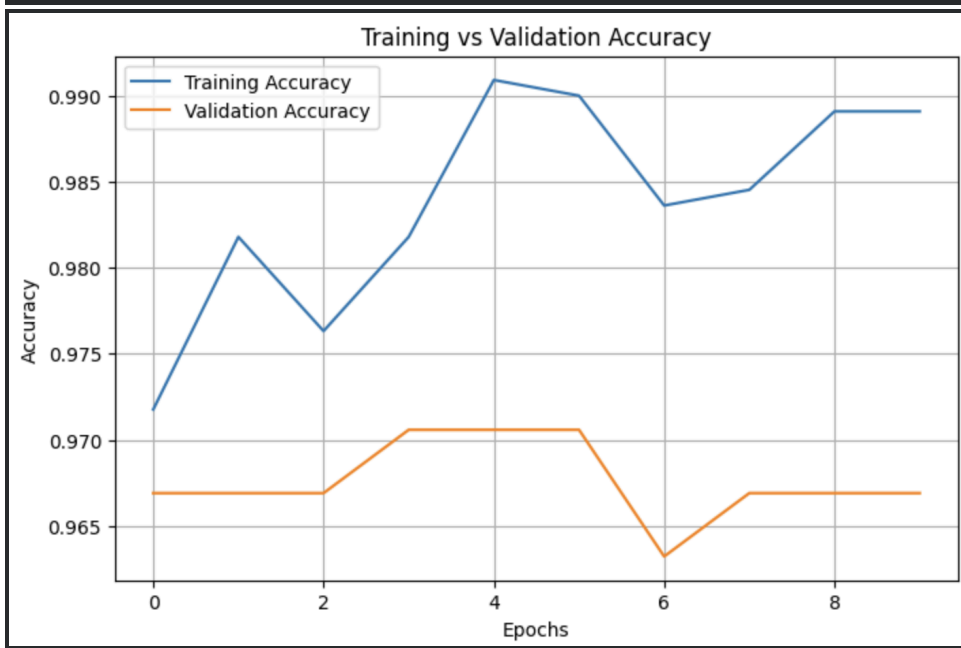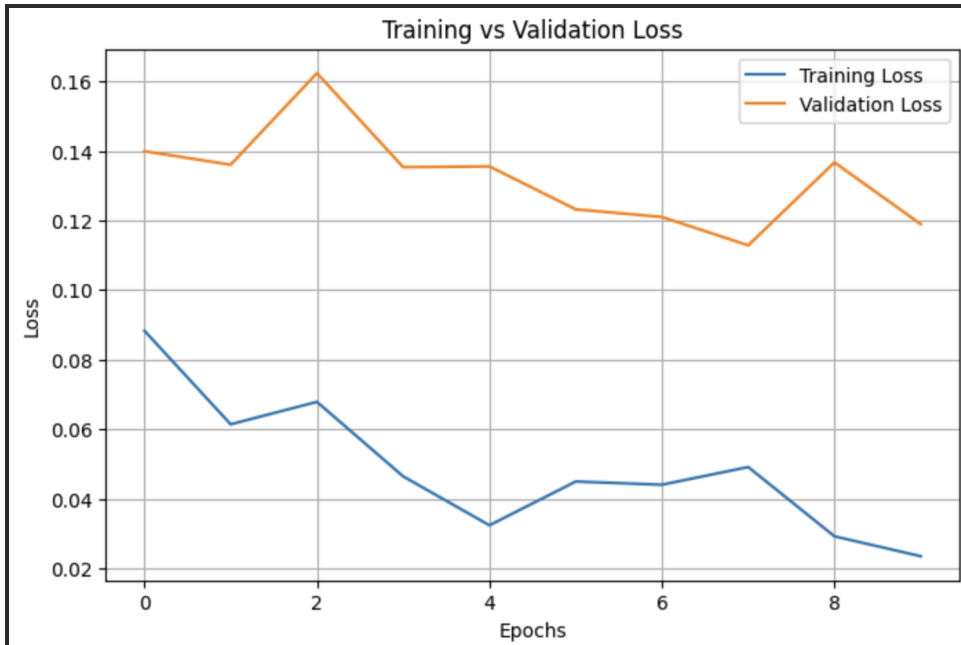
Based on all the experiments above, the best set of parameter that had found is at the iteration 3 which is:

```
Parameters:
  Number of layers = 158
  Dropout = 0.4
  Learning Rate = 0.0001
  Batch Size = 32
  Optimizer = RMSprop
  Epochs = 5
Training and Test Accuracy:
  Train = 96.27%
  Test = 97.43%
```
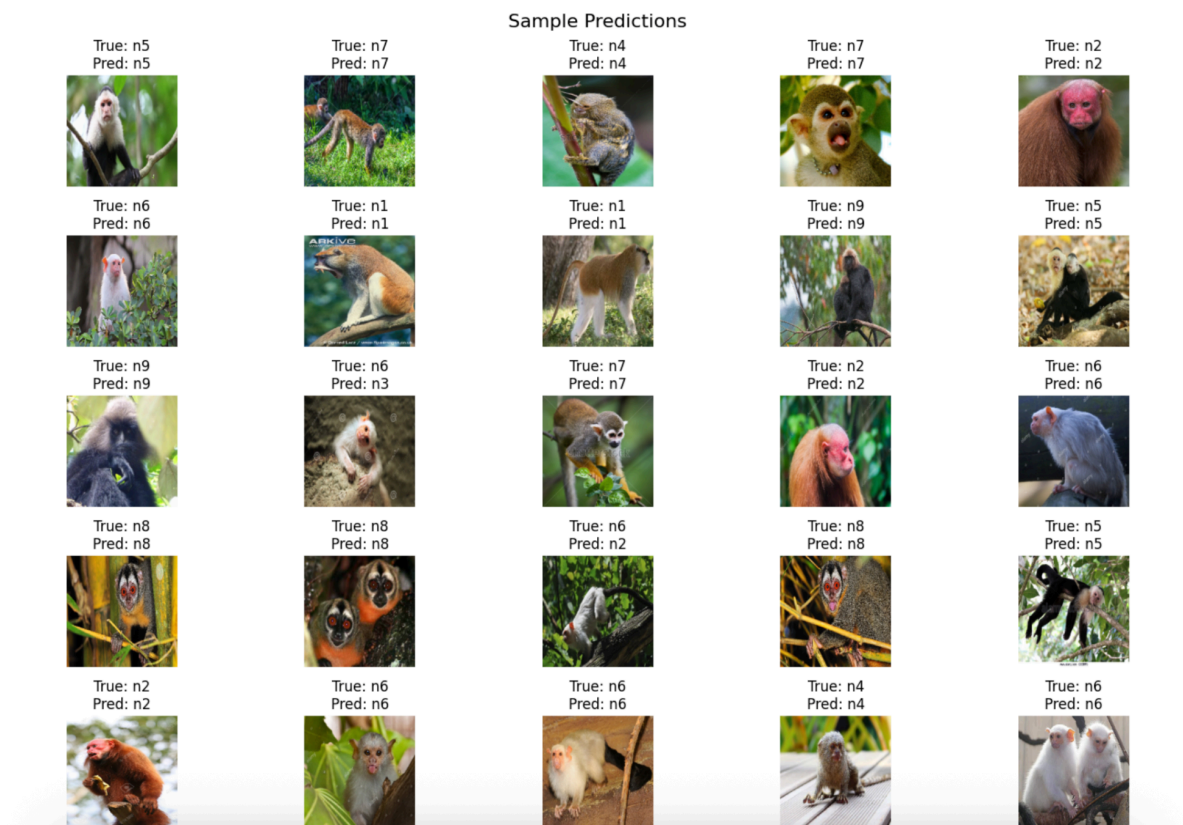
With the high training and testing accuracy.

Example of at least 25 test data points from test dataset:

Iteration	Parameter	Training And Testing Accuracy
1	Number of layers = 158 Dropout = 0.5 Learning Rate = 0.001 Optimizer = Adam Batch Size = 32 Epochs = 10	Train = 90.89% Test = 95.22%
2	Number of layers = 158 Dropout = 0.5 Learning Rate = 0.0005 Optimizer = Adam Batch Size = 32 Epochs = 5	Train = 92.62% Test = 95.96%
3	Number of layers = 158 Dropout = 0.4 Learning Rate = 0.0001 Optimizer = RMSprop Batch Size = 32 Epochs = 5	Train = 96.27% Test = 97.43%
4	Number of layers = 158 Learning rate = 0.001 Dropout = 0.4 Batch size = 16 Epochs = 10 Optimizer = Adam	Train = 98.91% Test = 96.69%