CS 4372 Assignment 3 Output

**History Plots:**

Base Model (BEST)

Chart, line chart

Description automatically generated

Fine Tuning Model

Chart

Description automatically generated

**Image Prediction Plots:**

A picture containing text

Description automatically generated

**Parameter Testing/Tuning**

|  |  |  |
| --- | --- | --- |
| **Iteration** | **Parameters** | **Training and Test Accuray** |
|  | Optimizer = adam  Learning rate = 0.0001  Epochs = 10 | Training = 0.0491  Testing = 0.0716 |
|  | Optimizer = adam  Learning rate = 0.0001  Epochs = 20 | Training = 0.0376  Testing = 0.0582 |
|  | Optimizer = adam  Learning rate = 0.0001  Epochs = 15 | Training = 0.0075  Testing = 0.0093 |
|  | Optimizer = nadam  Learning rate = 0.0001  Epochs = 10 | Training = 0.0093  Testing = 0.0093 |
|  | Optimizer = ftrl  Learning rate = 0.0001  Epochs = 10 | Training = 0.0083  Testing = 0.0088 |
|  | Optimizer = adam  Learning rate = 0.0005  Epochs = 10 | Training = 0.0083  Testing = 0.0088 |
|  | Optimizer = adam  Learning rate = 0.002  Epochs = 10 | Training = 0.0083  Testing = 0.008 |
|  | 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