

V.S.B. ENGINEERING COLLEGE, KARUR

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

IBM NALAIYA THIRAN

TRAIN THE MODEL ON IBM

Date	19 November 2022
Team ID	PNT2022TMID33300
Project Name	Fertilizers Recommendation System for Disease Prediction

TRAIN THE MODEL ON IBM:

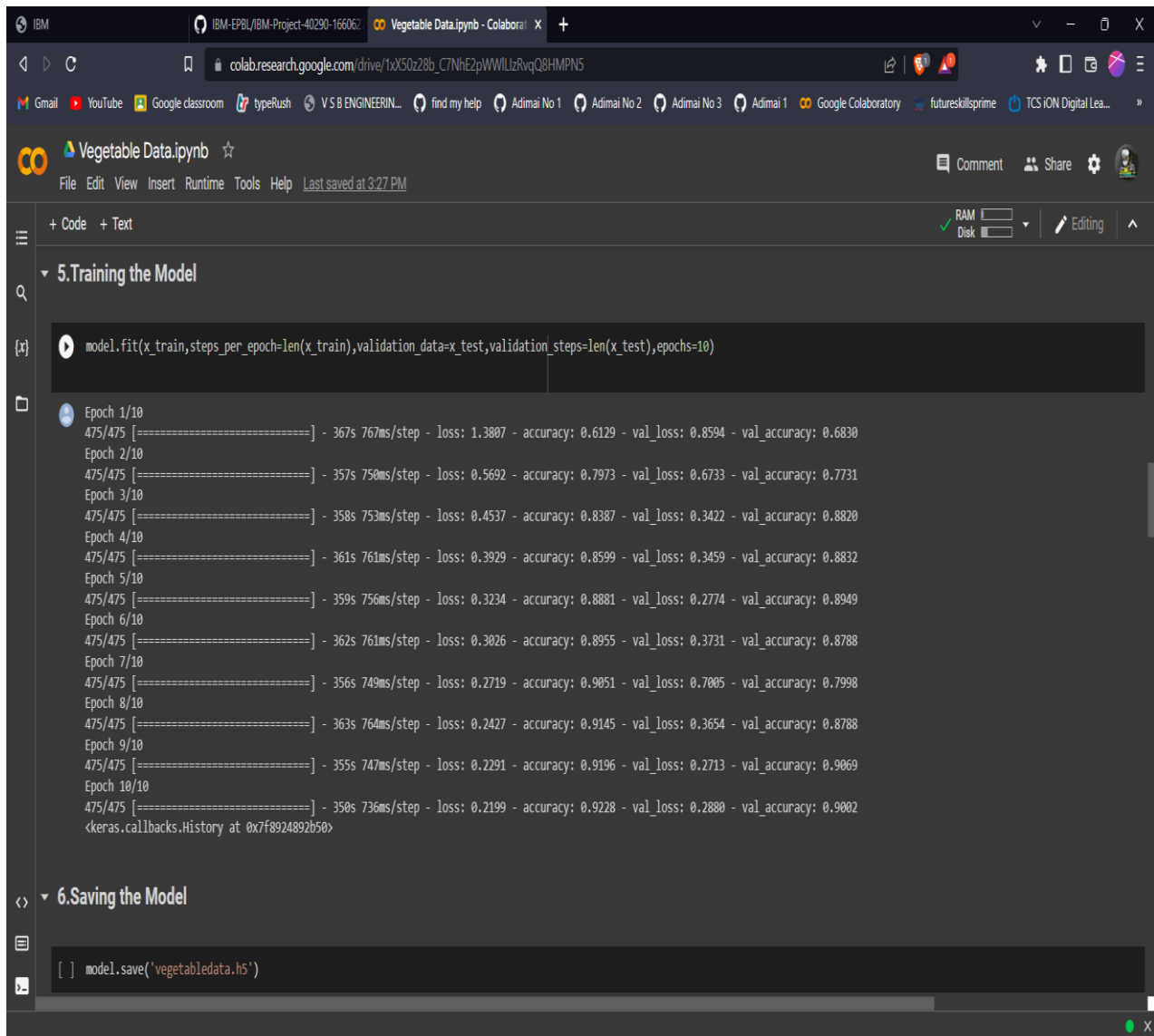
TRAINING FRUIT DATA:

```
model.fit(x_train, steps_per_epoch=len(x_train), validation_data=x_test, validation_steps=len(x_test), epochs=10)
```

```
Epoch 1/10
225/225 [=====] - 172s 764ms/step - loss: 0.2448 - accuracy: 0.9172 - val_loss: 0.2405 - val_accuracy: 0.9265
Epoch 2/10
225/225 [=====] - 169s 751ms/step - loss: 0.1923 - accuracy: 0.9372 - val_loss: 0.1990 - val_accuracy: 0.9342
Epoch 3/10
225/225 [=====] - 170s 755ms/step - loss: 0.1689 - accuracy: 0.9417 - val_loss: 0.2256 - val_accuracy: 0.9223
Epoch 4/10
225/225 [=====] - 175s 776ms/step - loss: 0.1387 - accuracy: 0.9543 - val_loss: 0.1027 - val_accuracy: 0.9638
Epoch 5/10
225/225 [=====] - 171s 762ms/step - loss: 0.1060 - accuracy: 0.9630 - val_loss: 0.1454 - val_accuracy: 0.9579
Epoch 6/10
225/225 [=====] - 172s 763ms/step - loss: 0.1124 - accuracy: 0.9614 - val_loss: 0.1907 - val_accuracy: 0.9324
Epoch 7/10
225/225 [=====] - 171s 760ms/step - loss: 0.1193 - accuracy: 0.9573 - val_loss: 0.1919 - val_accuracy: 0.9431
Epoch 8/10
225/225 [=====] - 171s 760ms/step - loss: 0.1144 - accuracy: 0.9584 - val_loss: 0.0965 - val_accuracy: 0.9668
Epoch 9/10
225/225 [=====] - 171s 758ms/step - loss: 0.1059 - accuracy: 0.9642 - val_loss: 0.1884 - val_accuracy: 0.9442
Epoch 10/10
225/225 [=====] - 172s 762ms/step - loss: 0.0756 - accuracy: 0.9727 - val_loss: 0.1998 - val_accuracy: 0.9437
<keras.callbacks.History at 0x7f13799efb10>
```

```
model.save('fruitdata.h5')
```

TRAINING VEGETABLES DATA:



```
model.fit(x_train, steps_per_epoch=len(x_train), validation_data=x_test, validation_steps=len(x_test), epochs=10)
```

Epoch 1/10
475/475 [=====] - 367s 767ms/step - loss: 1.3807 - accuracy: 0.6129 - val_loss: 0.8594 - val_accuracy: 0.6830
Epoch 2/10
475/475 [=====] - 357s 750ms/step - loss: 0.5692 - accuracy: 0.7973 - val_loss: 0.6733 - val_accuracy: 0.7731
Epoch 3/10
475/475 [=====] - 358s 753ms/step - loss: 0.4537 - accuracy: 0.8387 - val_loss: 0.3422 - val_accuracy: 0.8820
Epoch 4/10
475/475 [=====] - 361s 761ms/step - loss: 0.3929 - accuracy: 0.8599 - val_loss: 0.3459 - val_accuracy: 0.8832
Epoch 5/10
475/475 [=====] - 359s 756ms/step - loss: 0.3234 - accuracy: 0.8881 - val_loss: 0.2774 - val_accuracy: 0.8949
Epoch 6/10
475/475 [=====] - 362s 761ms/step - loss: 0.3026 - accuracy: 0.8955 - val_loss: 0.3731 - val_accuracy: 0.8788
Epoch 7/10
475/475 [=====] - 356s 749ms/step - loss: 0.2719 - accuracy: 0.9051 - val_loss: 0.7005 - val_accuracy: 0.7998
Epoch 8/10
475/475 [=====] - 363s 764ms/step - loss: 0.2427 - accuracy: 0.9145 - val_loss: 0.3654 - val_accuracy: 0.8788
Epoch 9/10
475/475 [=====] - 355s 747ms/step - loss: 0.2291 - accuracy: 0.9196 - val_loss: 0.2713 - val_accuracy: 0.9069
Epoch 10/10
475/475 [=====] - 350s 736ms/step - loss: 0.2199 - accuracy: 0.9228 - val_loss: 0.2880 - val_accuracy: 0.9002
<keras.callbacks.History at 0x7f8924892b50>

```
model.save('vegetabledata.h5')
```