

IBM Cloud

Create Account and Train the Model

IBM CLOUD ACCOUNT CREATION

ICT Academy SkillsNetwork

Account Details

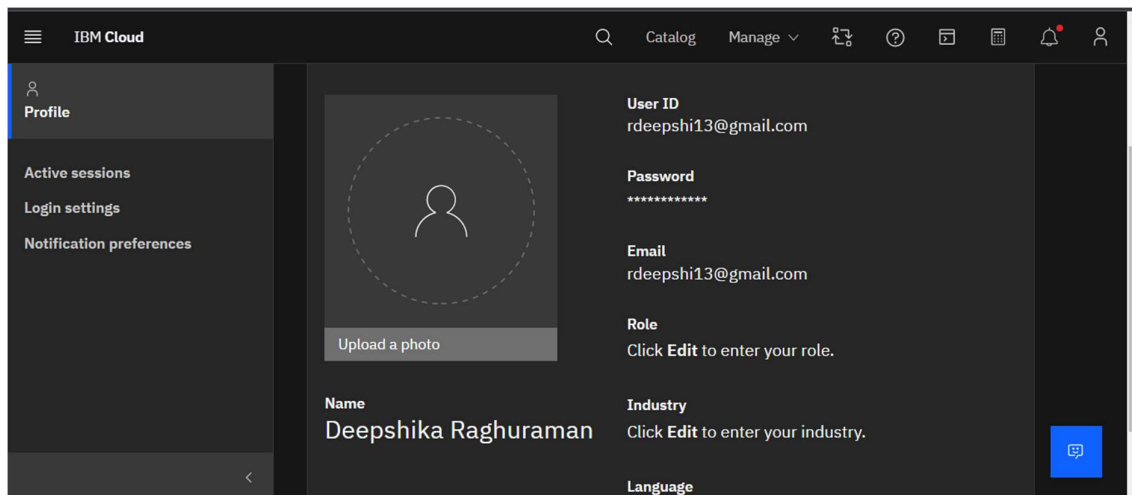
Email ID: rdeepshi13@gmail.com

Username: DR13

IBM CLOUD

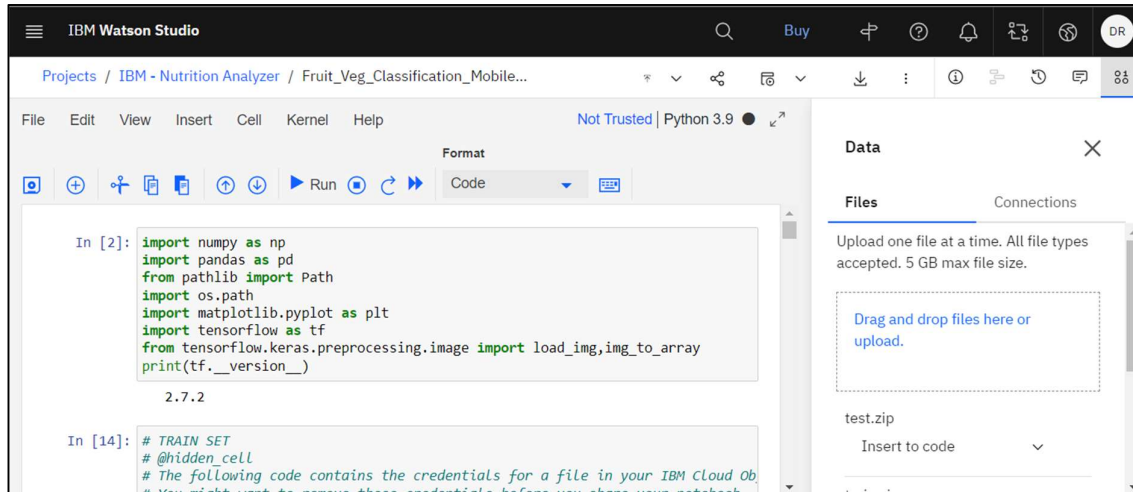
Feature Code: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxfa11

Account ID: 6b5741733bea4dcbbba8e661f8f188b95

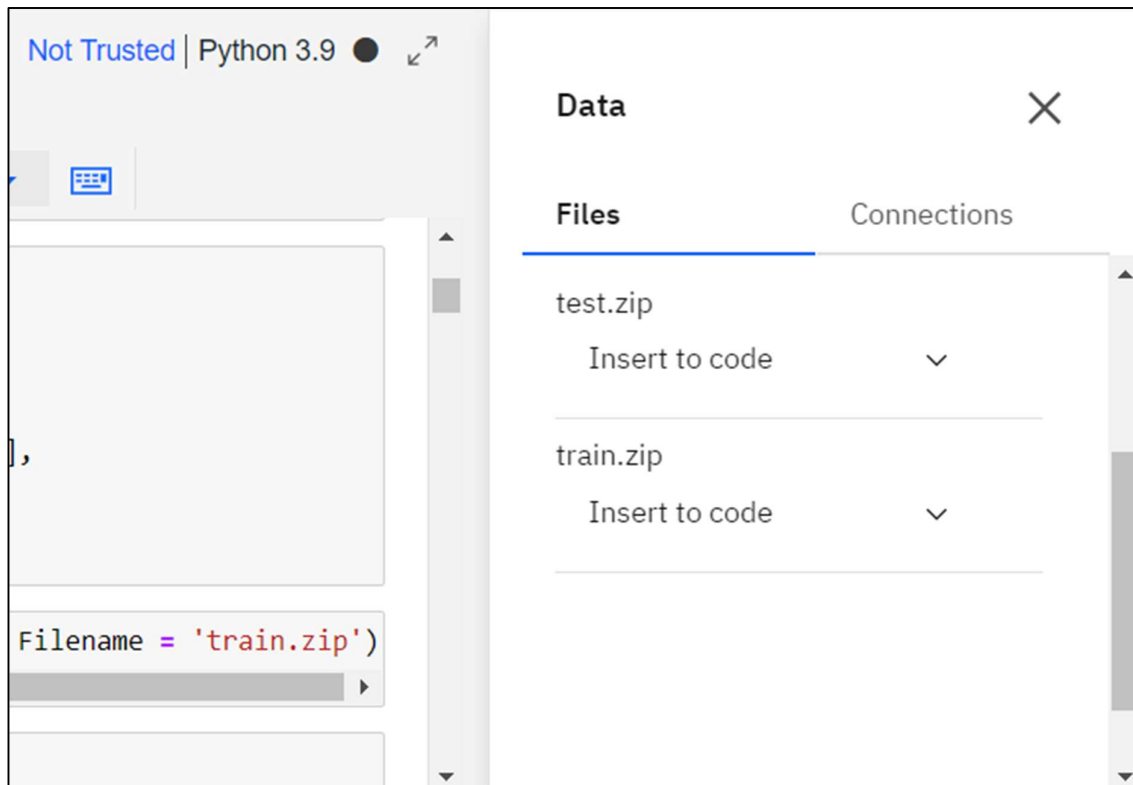


TRAIN MODEL ON IBM CLOUD

1. Create a new Jupyter project in IBM's Watson Studio.



2. Upload the dataset zip files and extract the contents



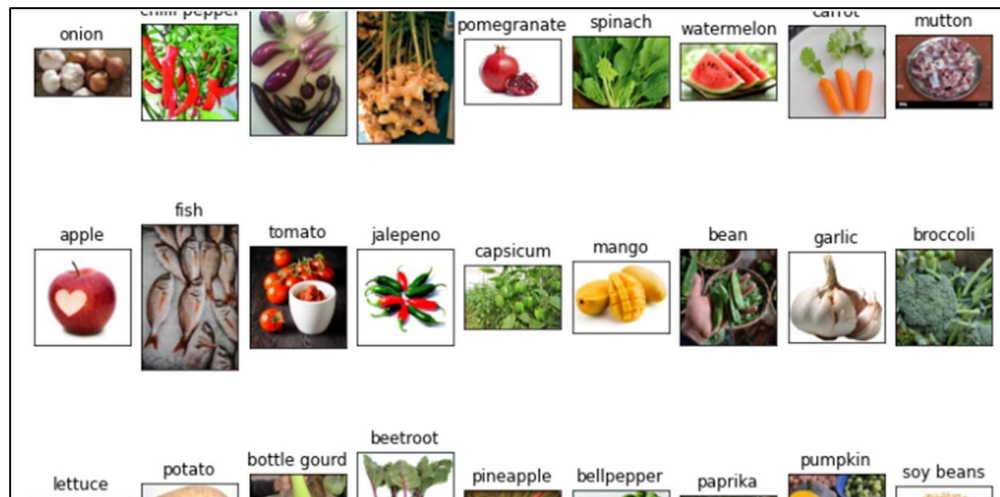
3. Train Set and Test Set Images

-- Training set --

Number of pictures: 4223

Number of different labels: 46

Labels: ['onion' 'chilli pepper' 'eggplant' 'ginger' 'pomegranate' 'spinach'
'watermelon' 'carrot' 'mutton' 'apple' 'fish' 'tomato' 'jalepeno'
'capsicum' 'mango' 'bean' 'garlic' 'broccoli' 'lettuce' 'potato'
'bottle gourd' 'beetroot' 'pineapple' 'bellpepper' 'paprika' 'pumpkin'
'soy beans' 'peas' 'cucumber' 'turnip' 'egg' 'raddish' 'lemon' 'pear'
'chicken' 'orange' 'cauliflower' 'corn' 'bitter gourd' 'kiwi' 'papaya'
'banana' 'cabbage' 'sweetcorn' 'sweetpotato' 'grapes']

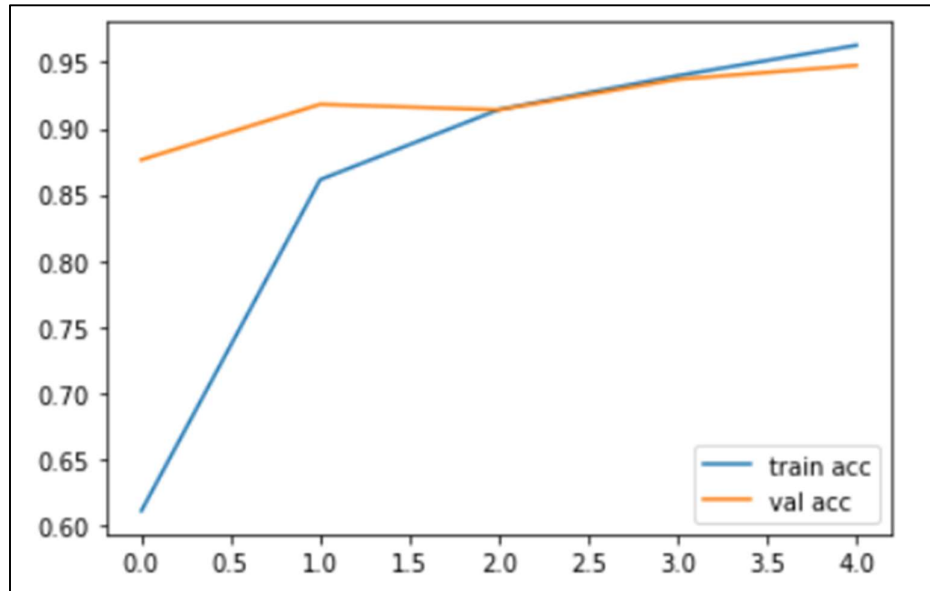


4. Build the model

```
132/132 [=====] - 300s 2s/step - loss: 1.5084 -  
accuracy: 0.6109 - val_loss: 0.4428 - val_accuracy: 0.8763  
Epoch 2/5  
132/132 [=====] - 284s 2s/step - loss: 0.4513 -  
accuracy: 0.8612 - val_loss: 0.2671 - val_accuracy: 0.9182  
Epoch 3/5  
132/132 [=====] - 285s 2s/step - loss: 0.2698 -  
accuracy: 0.9143 - val_loss: 0.2639 - val_accuracy: 0.9140  
Epoch 4/5  
132/132 [=====] - 292s 2s/step - loss: 0.1975 -  
accuracy: 0.9399 - val_loss: 0.2330 - val_accuracy: 0.9371  
Epoch 5/5  
132/132 [=====] - 295s 2s/step - loss: 0.1231 -  
accuracy: 0.9628 - val_loss: 0.1921 - val_accuracy: 0.9476
```

5. Evaluate the Model

Accuracy Graph



Confusion Matrix

```
array([[ 8,  0,  0, ...,  0,  0,  0],
       [ 0,  7,  0, ...,  0,  0,  0],
       [ 0,  0, 10, ...,  0,  0,  0],
       ...,
       [ 0,  0,  0, ...,  9,  0,  0],
       [ 0,  0,  0, ...,  0, 10,  0],
       [ 0,  0,  0, ...,  0,  0, 10]])
```

Evaluation Metrics

```
PRECISION SCORE : 0.952140452140452
RECALL SCORE : 0.9475890985324947
F1 SCORE : 0.9454436033097522
```

IBM Watson Studio

Buy

DR

Projects / IBM - Nutrition Analyzer

Launch IDE

Overview

Assets

Jobs

Manage

Find assets

Import assets

New asset

3 assets

All assets

Asset types

Data2

Notebooks1

All assets

Name	Last modified
Fruit_Veg_Classifica... Notebook	3 minutes ago Modified by you
train.zip application/x-zip-compressed	1 hour ago Modified by you
test.zip application/x-zip-compressed	2 hours ago Modified by you

Items per page: 20 1-3 of 3 items 1 of 1 pages

Data in this project

Drop data files here or
browse for files to upload

----- X -----