Classify images of clothing

參考網址： HTTPS://WWW.TENSORFLOW.ORG/TUTORIALS?HL=ZH-T

Outline

Colaboratory

使用套件

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Colaboratory

簡稱 Colab

瀏覽器上即可撰寫及執行Python

不必進行任何設定

免費使用GPU

使用套件

```
import tensorflow as tf

import numpy as np

import matplotlib.pyplot as plt


print(tf._ _ version _ _) //查看tensorflow目前版本
```

1. Explore the data

Output the number of images and image pixels of the training dataset and the test dataset, separately.

Expected result as belowed:

```
Training Images Shape: (xxxxx, xx, xx)
Training Labels Shape: (xxxxx,)
Testing Images Shape: (xxxxx, xx, xx)
Testing Labels Shape: (xxxxx,)
```

2. Process the data

Scale these values to a range of 0 to 1 before feeding them to the neural network model.

Hint: Pixels values fall in the range of 0 to 255

3. Make prediction

Show the x th prediction array of 10 numbers (x is the last two codes of your student ID)

And answer which label has the highest confidence value in your report.

Expected result as bellowed: (if x = 24)

3. predction array[24]:

[x,x,x,x,x

x,x,x,x,x]

4. Show your prediction results

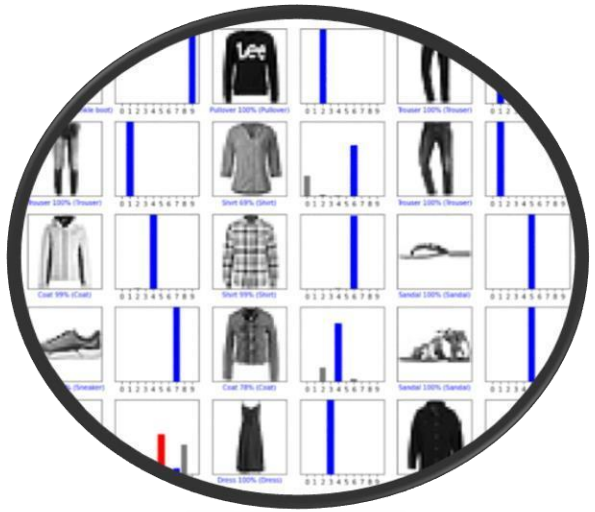
Show the results of your prediction in your report.

And answer which has the wrong prediction.

5. Use the Trained model

Make a prediction of a single image

Use the x th image of the test dataset (x is the last two codes of your student ID)



作業繳交方式

附上程式碼(.ipynb檔, EX : 610430000_姓名.ipynb)

報告:

- 擷取1~5題中的程式碼及結果,並在報告中簡單說明程式碼流程
- 封面(打上學號及姓名)
- 檔案格式為.pdf(EX : 610430000_姓名_HW1.pdf)

將上述報告及程式碼檔案壓縮成610430000_姓名.zip上傳。

上述所有繳交格式若有錯誤一律0分!!!