

IBM-EPBL/IBM-Project-25867-10 x DigitRecognition.ipynb - Colaboratory

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DigitRecognition.ipynb

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Requirement already satisfied: urllib3<1.25.0, >=1.25.1, <1.26, >=1.21.1 in /usr/local/lib/python3.7/dist-packages (from requests<3, >=2.21.0->tensorboard<2.10, >=2.9->tensorflow) (2.10)

Requirement already satisfied: idna<3, >=2.5 in /usr/local/lib/python3.7/dist-packages (from requests<3, >=2.21.0->tensorboard<2.10, >=2.9->tensorflow) (2.10)

Requirement already satisfied: oauthlib<3.0.0 in /usr/local/lib/python3.7/dist-packages (from requests-oauthlib<0.7.0->google-auth-oauthlib<0.5, >=0.4.1->tensorboard<2.10, >=2.9->tensorflow) (3.0.0)

Requirement already satisfied: pyparsing<3.0.5, >=2.0.2 in /usr/local/lib/python3.7/dist-packages (from packaging->tensorflow) (3.0.9)

```
[ ] import tensorflow as tf
import tensorflow.keras as keras
from tensorflow.keras import layers
keras.backend.set_image_data_format('channels_last')

[ ] import matplotlib.pyplot as plt
from sklearn.model_selection import train_test_split
from sklearn.metrics import confusion_matrix
from tensorflow.keras.models import Sequential
from tensorflow.keras.layers import Dense, Conv2D, MaxPool2D, Flatten

[ ] import numpy as np
import pandas as pd

[ ] train = pd.read_csv("/content/drive/MyDrive/mnist dataset/train.csv")
test = pd.read_csv("/content/drive/MyDrive/mnist dataset/test.csv")

[ ] train.head()
```

	label	pixel0	pixel1	pixel2	pixel3	pixel4	pixel5	pixel6	pixel7	pixel8	...	pixel774	pixel775	pixel776	pixel777	pixel778	pixel779	pixel780	pixel781	pixel782	pixel783
0	1	0	0	0	0	0	0	0	0	0	...	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0	...	0	0	0	0	0	0	0	0	0	0

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1	0	0	0	0	0	0	0	0	0	0	...	0	0	0	0	0	0	0	0	0	0
2	1	0	0	0	0	0	0	0	0	0	...	0	0	0	0	0	0	0	0	0	0
3	4	0	0	0	0	0	0	0	0	0	...	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	...	0	0	0	0	0	0	0	0	0	0

5 rows x 785 columns

```
[ ] test.head()
```

	pixel0	pixel1	pixel2	pixel3	pixel4	pixel5	pixel6	pixel7	pixel8	...	pixel774	pixel775	pixel776	pixel777	pixel778	pixel779	pixel780	pixel781	pixel782	pixel783
0	0	0	0	0	0	0	0	0	0	...	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	...	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	...	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	...	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	...	0	0	0	0	0	0	0	0	0	0

5 rows x 784 columns



