## ANALYZING THE DATA

Team ID	PNT2022TMID50703
Project Name	A Novel Method for Handwritten
	Digit Recognition System

## **Analyzing the data:**

```
X train[0]
     Ο,
                   0, 0, 0, 0, 0, 0, 0, 0], [
                                Ο,
                                  0, 0, 0, 0,
             0, 0, 0, 0, 0, 0, 0, 0, 0,
             Ο,
              0],[
                 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 3, 18, 18, 18, 126, 136, 175,
26, 166, 255, 247, 127, 0, 0, 0, 0], [ 0, 0, 0, 0, 0, 0, 0, 30, 36, 94, 154, 170, 253, 253, 253,
253, 253, 225, 172, 253, 242, 195, 64, 0, 0, 0, 0], [ 0, 0, 0, 0, 0, 0, 0, 49, 238, 253, 253, 253,
253, 253, 253, 253, 253, 251, 93, 82, 82, 56, 39, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 18, 219,
80, 156, 107, 253, 253, 205, 11, 0, 43, 154, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
[ 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 35,
241, 225, 160, 108, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0], [ 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 81,
240, 253, 253, 119, 25, 0, 0, 0, 0, 0, 0, 0, 0, 0, [
                          0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
253, 207, 2, 0, 0, 0, 0, 0, 0, 0],
                     0, 0, 0, 0, 0, 0, 0, 0, 0, 39, 148, 229, 253, 253, 253,
                  Ο,
                   Ο,
250, 182, 0, 0, 0, 0, 0, 0, 0, 0], [ 0, 0, 0, 0, 0, 0, 0, 0, 0, 24, 114, 221, 253, 253, 253, 253,
                   0, 0, 0, 0, 0, 0, 0, 0, 23, 66, 213, 253, 253, 253, 253, 198,
81, 2, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0], [ 0, 0, 0, 0, 0, 18, 171, 219, 253, 253, 253, 253, 195, 80,
```

- Basically, the pixel values range from 0-255. Here we are printing the first image pixel value which is index [0] of the training data.
- With respect to this image, the label of this image will e stored in y\_train let's see what is the label of this image by grabbing it from the y\_train variables.

```
print("The label value is ",y_train[0])
plt.imshow(X_test[0])
```

