A Novel Method for Handwritten Digit Recognition System

Team Id: PNT2022TMID15485 ***Test the model***

In [29]:
```
prediction = model.predict(X_test[:4])
print(prediction)
```

```
1/1 [==============================] - 0s 64ms/step
[[4.77358049e-11 1.26020884e-14 2.23637656e-07 2.59297366e-07
  1.53105145e-18 1.41474479e-13 2.73819453e-19 9.99999523e-01
  5.75746352e-12 1.40723442e-08]
 [3.92702641e-05 3.63764530e-09 9.99928832e-01 1.10518204e-06
  3.28396650e-11 1.87219923e-13 3.02575540e-06 4.75269130e-12
  2.79003762e-05 1.17118581e-09]
 [3.37602168e-11 9.99982953e-01 7.10459869e-09 3.63090309e-13
  1.67968246e-05 6.36366426e-09 4.59948364e-11 2.65287614e-09
  2.72516672e-07 1.53049936e-12]
 [9.99999762e-01 1.02759820e-17 6.89465485e-10 4.13503087e-14
  3.53135576e-12 2.56500203e-11 6.89072754e-09 4.50628203e-14
  8.74276596e-10 1.82247064e-07]]
```

In [22]:
```
print(numpy.argmax(prediction, axis=1))
print(Y_test[:4])
```

```
[7 2 1 0]
[[0. 0. 0. 0. 0. 0. 0. 1. 0. 0.]
 [0. 0. 1. 0. 0. 0. 0. 0. 0. 0.]
 [0. 1. 0. 0. 0. 0. 0. 0. 0. 0.]
 [1. 0. 0. 0. 0. 0. 0. 0. 0. 0.]]
```