

A Novel Method for Handwritten Digit Recognition System

Reshaping The Data

+ Code + Text

RESHAPING THE DATA

```
[ ] X_train = X_train.reshape(60000,28,28,1).astype('float32')
    X_test = X_test.reshape(10000,28,28,1).astype('float32')
```



X_train

```
array([[[[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.]]],
      dtype=float32)
```

```
[ ] X_test
```

```
[[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.],  
 [0.],  
 ...,  
 [0.],  
 [0.],  
 [0.]],
```