**Convolutional Neural Network (CNN)**

**using MNIST dataset**

* **Convolutional layers**

1] Conv layer #1: 32 filter (3,3)

2] Conv layer #2: 64 filter (3,3)

3] Conv layer #3: 128 filter (3,3)

**Number of Convolutional layers = 3**

* **Dense layers**

1] Dense layer #1: 128 filter with activation function relu

2] Dense layer #2: 10 with activation function softmax

**Number of Dense layers = 2**

* **Activation Function**

The **Softmax activation function is better than Relu** function as a useful for recurrent networks, probabilistic models, and some autoencoders have additional requirements that rule out the use of piecewise linear activation functions like Relu.

* **The pooling layer**

1] Max pooling layer #1: pooling size (2,2)

2] Max pooling layer #2: pooling size (2,2)

3] Max pooling layer #1: pooling size (2,2)

**Number of Max pooling layer = 3**

the max pooling layers is added after each convolutional layer,

used to reduce the number of parameters and reduce the reduce the dimension of the model feature as it takes the maximum value.