Understanding the Data (Sprint-1)

```
[ ] 4 21 cells hidden
```

→ Defining Model (sprint-2)

```
#Import libraries
from keras.models import Sequential
from keras.layers import Dense, Dropout, Flatten
from keras.layers import Conv2D, MaxPool2D
#Adding Layers
model = Sequential()
model.add(Conv2D(filters=32, kernel_size=(4,4),activation='relu',input_shape=(28,28,1)))
model.add(MaxPool2D(pool size=(2,2)))
model.add(Flatten())
model.add(Dense(128,activation='relu'))
model.add(Dense(10,activation='softmax'))
#Compilation of the model
model.compile(loss='categorical_crossentropy',optimizer='Adadelta',metrics=['accuracy'])
#Early Stopping and Callbacks
from tensorflow.keras.callbacks import EarlyStopping
early_stop = EarlyStopping(monitor='val-loss', patience=1)
#Test the Model
model.fit(x_train,y_cat_train,
      epochs=15,
      validation_data=(x_test,y_cat_test),
      callbacks=[early_stop])
   Epoch 1/15
   1875/1875 [==================== ] - 7s 3ms/step - loss: 0.0072 - accuracy: 0
   Epoch 2/15
   Epoch 3/15
```

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```
Epoch 4/15
1875/1875 [===================== ] - 6s 3ms/step - loss: 0.0059 - accuracy: 0
Epoch 7/15
Epoch 8/15
Epoch 9/15
Epoch 10/15
Epoch 11/15
Epoch 14/15
Epoch 15/15
<keras.callbacks.History at 0x7f403c0cf190>
```

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