

# Build a neural network using Tensorflow - Keras

## Create Model

```
from tensorflow.keras import models, layers

model = models.Sequential([
    layers.Flatten(input_shape=(756,), name="input_layer"),
    layers.Dense(16, activation='sigmoid', name = "hidden_layer_1"),
    layers.Dense(32, activation='tanh', name = "hidden_layer_2"),
    layers.Dense(64, activation='relu', name = "hidden_layer_3"),
    layers.Dense(10, activation='softmax', name = "output_layer")
])

model.summary()
```

### Model Summary:

Model: "sequential\_4"

Layer (type)	Output Shape	Param #
input_layer (Flatten)	(None, 756)	0
hidden_layer_1 (Dense)	(None, 16)	12112
hidden_layer_2 (Dense)	(None, 32)	544
hidden_layer_3 (Dense)	(None, 64)	2112
output_layer (Dense)	(None, 10)	650

=====  
Total params: 15,418  
Trainable params: 15,418  
Non-trainable params: 0

## Neural Network Drawing

