# Deep Learning

### Application 5

**TensorFlow application which Calculate Loss.**

```
import tensorflow as tf

print("Marvellous Infosystems : Machine Learning")

#Model parameter
w = tf.compat.v1.Variable([.3],tf.float32)
b = tf.compat.v1.Variable([-.3],tf.float32)
# w = -1 b = 1

# Input and Output
x = tf.compat.v1.placeholder(tf.float32)

linear_model = w * x + b

y = tf.compat.v1.placeholder(tf.float32)

# Loss function
squared_delta = tf.square(linear_model-y)
loss = tf.reduce_sum(squared_delta)

init = tf.global_variables_initializer()

# Run computational graph
sobj = tf.compat.v1.Session()

sobj.run(init)

print(sobj.run(loss,{x:[1,2,3,4],y:[0,-1,-2,-3]}))
sobj.close()

```

**Output of above application**

```
(base) MacBook-Pro-de-MARVELLOUS:TensorApplications
 marvellous$ python3 TensorLosss.py
Marvellous Infosystems : Machine Learning
WARNING: Logging before flag parsing goes to stderr
.
W0608 22:46:16.537499 140736429507520 deprecation_w
rapper.py:118] From TensorLosss.py:21: The name tf.
global_variables_initializer is deprecated. Please
use tf.compat.v1.global_variables_initializer inste
ad.

2019-06-08 22:46:16.540992: I tensorflow/core/platf
orm/cpu_feature_guard.cc:142] Your CPU supports ins
tructions that this TensorFlow binary was not compi
led to use: AVX2 FMA
23.66
(base) MacBook-Pro-de-MARVELLOUS:TensorApplications
 marvellous$
```