## tensorflow

```
import numpy as np
import tensorflow as tf

coefficients = np.array([[1], [-20], [25]]) •
w = tf.Variable([0],dtype=tf.float32)
x = tf.placeholder(tf.float32, [3,1])
cost = x[0][0]*w**2 + x[1][0]*w + x[2][0]  # (w-5)**2
train = tf.train.GradientDescentOptimizer(0.01).minimize(cost)
init = tf.global_variables_initializer()
with tf.Session() as session:
    session.run(init)
    print(session.run(w))

for i in range(1000):
    session.run(train, feed_dict={x:coefficients})
print(session.run(w))
```

```
Code example
   import numpy as np
   import tensorflow as tf
   coefficients = np.array([[1], [-20], [25]]
   w = tf.Variable([0],dtype=tf.float32)
   x = tf.placeholder(tf.float32, [3,1])
  cost = x[0][0]*w**2 + x[1][0]*w + x[2][0]
                                                # (w-5) **
   train = tf.train.GradientDescentOptimizer(0.01).minimize(cost)
   init = tf.global variables initializer()
   session = tf.Session()
                                     with tf.Session() as session:
                                          session.run(init) ←
   session.run(init)
                                          print(session.run(w))
   print (session.run(w))
   for i in range (1000):
        session.run(train, feed dict={x:coefficients})
                                                                             Andrew Ng
   print (session.run(w))
```