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CAMPS, ACADEMIES & ONLINE

# **ID Tech AI and Machine Learning**

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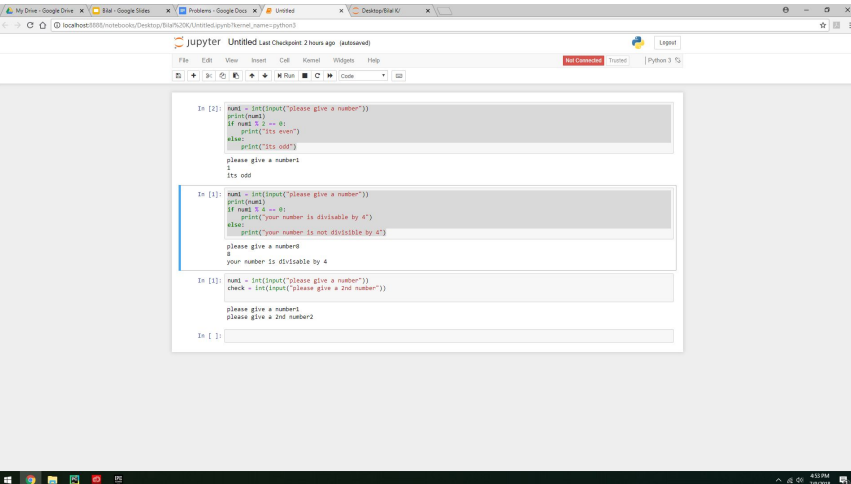


**HORNETS**  
**SACRAMENTO STATE**

Course: AI and Machine Learning  
Instructor: Biscuit

# Monday

- Today I learned how to take user input
- Some challenges were remembered different lines of codes used in python



```
In [2]: num1 = int(input("please give a number"))
print(num1)
if num1 % 2 == 0:
    print("its even")
else:
    print("its odd")

please give a number1
1
its odd

In [1]: num1 = int(input("please give a number"))
print(num1)
if num1 % 4 == 0:
    print("your number is divisible by 4")
else:
    print("your number is not divisible by 4")

please give a number1
8
your number is divisible by 4

In [3]: num1 = int(input("please give a number"))
check = int(input("please give a 2nd number"))

please give a number1
please give a 2nd number2

In [ ]:
```

# Tuesday



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- How TensorFlow works
- Learning new ways to type the code

The screenshot shows a Jupyter Notebook window with the title 'jupyter TF Last Checkpoint: 25 minutes ago (autosaved)'. The interface includes a menu bar (File, Edit, View, Insert, Cell, Kernel, Widgets, Help) and a toolbar with icons for file operations, running, and code execution. The code is written in a text area with a light gray background and a green border. The code defines variables x, y, and z as TensorFlow constants and calculates their product, storing it in 'result'. It also shows the beginning of a session context manager.

```
In [1]: import tensorflow as tf

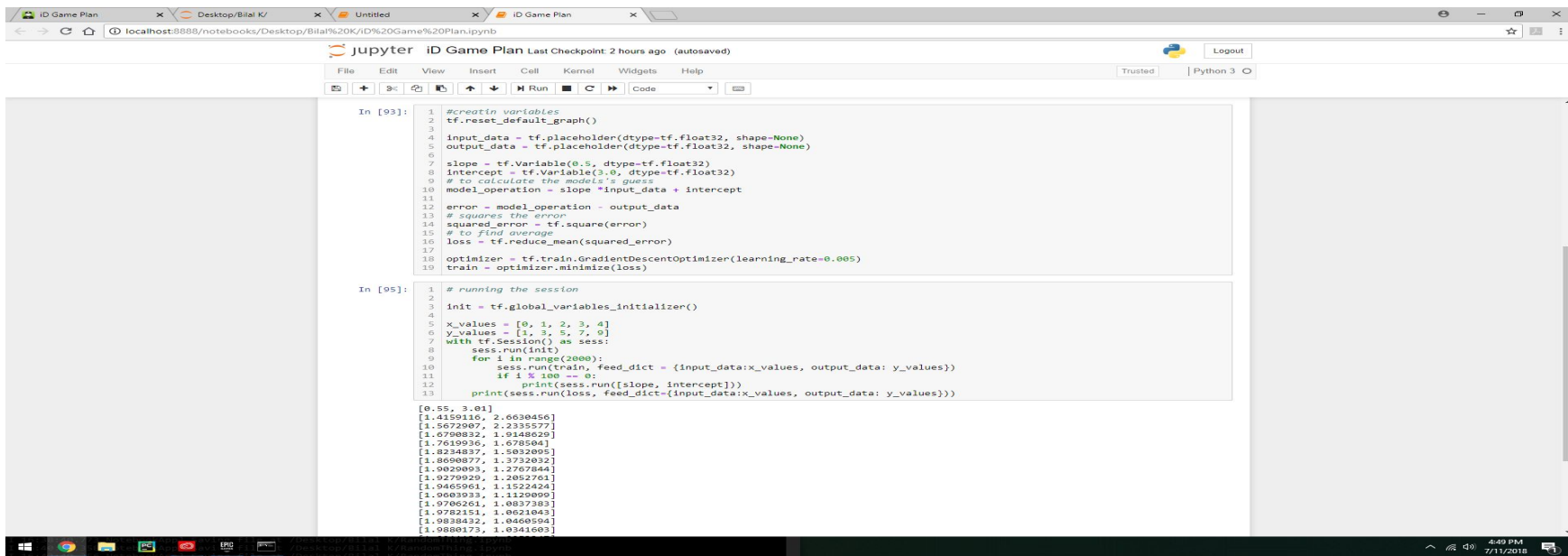
In [6]: x = tf.constant(3.0, dtype= tf.float32)
        y = tf.constant(4.0, dtype= tf.float32)
        z = tf.constant(1.0, dtype= tf.float32)
        result = x*y*z

        with tf.Session() as sesses
        |

In [ ]:
```

# Wednesday

- How the machine learning program works
- Working on creating code by myself



The screenshot shows a Jupyter Notebook titled "iD Game Plan" with two code cells. The first cell, labeled "In [93]:", contains TensorFlow code to create variables, define input and output placeholders, calculate the loss, and train the model using GradientDescentOptimizer. The second cell, labeled "In [95]:", contains code to run the session, initialize variables, and print the loss and model parameters (slope and intercept) for the first 100 iterations. The output of the second cell shows the loss decreasing from approximately 0.55 to 0.00173, and the slope and intercept converging to approximately 2.6630456 and 1.1522424 respectively.

```
In [93]: 1 #create variables
2         tf.reset_default_graph()
3
4         input_data = tf.placeholder(dtype=tf.float32, shape=None)
5         output_data = tf.placeholder(dtype=tf.float32, shape=None)
6
7         slope = tf.Variable(0.5, dtype=tf.float32)
8         intercept = tf.Variable(3.0, dtype=tf.float32)
9         # to calculate the model's guess
10        model_operation = slope * input_data + intercept
11
12        error = model_operation - output_data
13        # squares the error
14        squared_error = tf.square(error)
15        # to find average
16        loss = tf.reduce_mean(squared_error)
17
18        optimizer = tf.train.GradientDescentOptimizer(learning_rate=0.005)
19        train = optimizer.minimize(loss)
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# Your Project



I wrote a code in python that would create a random size grid and it would have random numbers generated in the grid. Then the computer would show how many moves it took to get to a certain place on the grid. Some challenges that I faced during making it was that trying to code the moves it would take the computer. The project in the beginning made a grid, then made it randomized, and lastly I coded how many moves it took the computer to move to a certain space

# Favorite Camp Memory



My favorite camp memory was when we were coming back from lunch and Luke purposely dropped all his tickets for other people.

