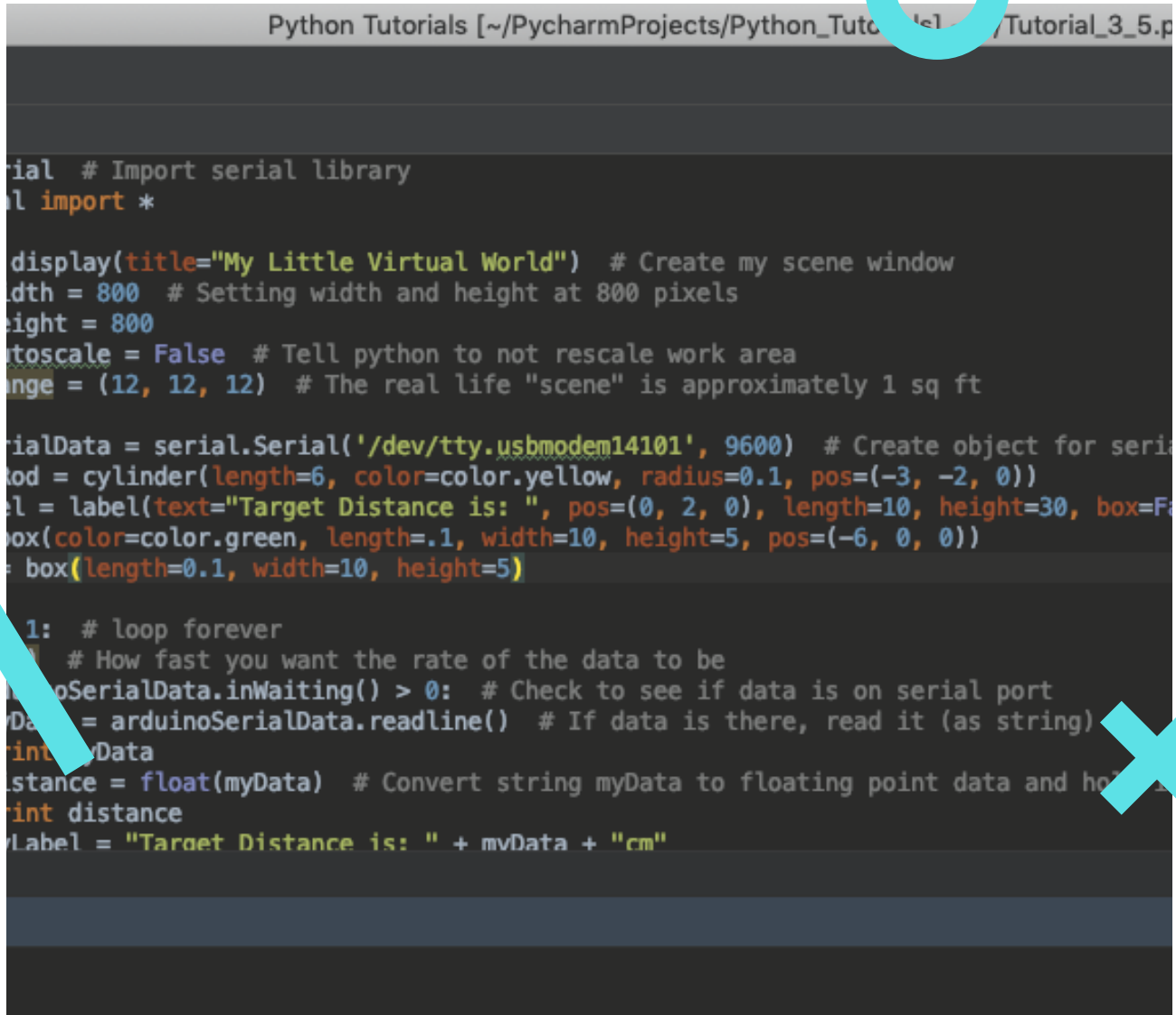


# Intro to Coding for Senior High

Learn scientific computing basics

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```
Python Tutorials [~/PycharmProjects/Python_Tutorials/Tutorial_3_5.p]

# Import serial library
import *

display(title="My Little Virtual World") # Create my scene window
width = 800 # Setting width and height at 800 pixels
height = 800
autoscale = False # Tell python to not rescale work area
range = (12, 12, 12) # The real life "scene" is approximately 1 sq ft

serialData = serial.Serial('/dev/tty.usbmodem14101', 9600) # Create object for serial
cylinder(length=6, color=color.yellow, radius=0.1, pos=(-3, -2, 0))
label(text="Target Distance is: ", pos=(0, 2, 0), length=10, height=30, box=False)
box(color=color.green, length=.1, width=10, height=5, pos=(-6, 0, 0))
box(length=0.1, width=10, height=5)

while True: # loop forever
    # How fast you want the rate of the data to be
    if arduinoSerialData.inWaiting() > 0: # Check to see if data is on serial port
        myData = arduinoSerialData.readline() # If data is there, read it (as string)
        print(myData)
        distance = float(myData) # Convert string myData to floating point data and hold it
        print distance
        Label = "Target Distance is: " + mvData + "cm"
```

Bring your own laptop if possible

Forest Heights Academy 08/22/19, 9am- 1pm

# FAQ

This tutorial will cover an introduction to coding using the programming language R. You will learn some of the advantages to using coding for analyzing data.

## Can I join this tutorial if I've never coded before?

Absolute beginners are more than welcome. The only thing we ask is that you have used an Excel spreadsheet in the past.

## I'm not sure what I would even do if I learned to code. Why should I go to this tutorial?

Programming allows you to better understand the world around you. You can learn to design your own website, make digital art, and develop artificial intelligence. The world is at your fingertips. Having a coding background makes you very employable, as it is in high demand. All that it takes to get started are a few basic skills (including learning "how to google").

## What do I need to get started?

If you have your own computer, please bring it with you. Sign up via the form provided to you and read the "getting started" document after doing so. Download the newest version of R at <https://cran.itam.mx> for either Mac or Windows, depending on your machine. Other than that, bring your creativity and problem solving skills! :-)

