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Dr. Wengrove

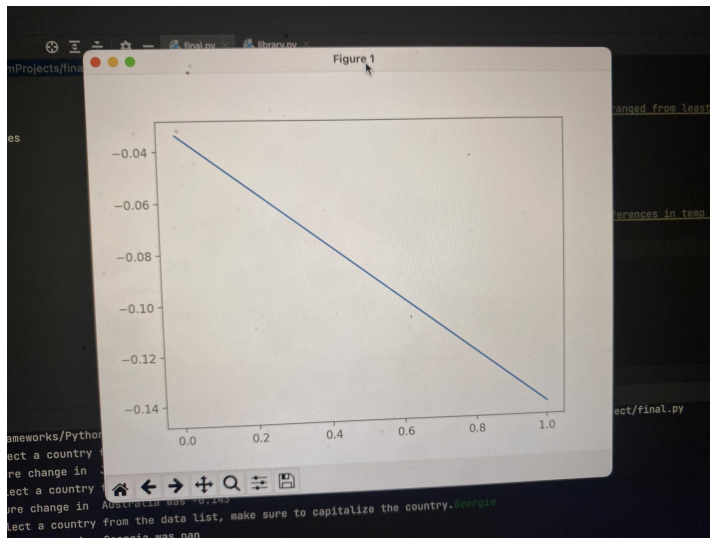
### **Final analysis of code and data set**

One of the largest issues facing our current day society is global warming and the overall consequences of climate change. Climate change is mainly due to the excessive amounts of carbon dioxide and other greenhouse gases emitted daily. It is estimated that within the next 100 years the earth will rise an average of 3.5 degrees. If the earth even warms another 1.7 degrees, drastic consequences will unfold upon our planet and we will witness increased natural disasters, famine, fires, extinctions, and people across the world will be disproportionately affected. It is incredibly important that we reduce any temperature increasement due to these effects that could arise quite quickly with intensity.

Some of the world has yet to believe in climate change because the rising in temperature is so small and insignificant right now, but many do not realize that these small incremental increases are directly correlated with wildfires and droughts which impact everyone in one way or another. However, it's not as simple as simply increasing temperature worldwide. Climate change also involves zones decreasing in temperature which entails completely altering the ecology of the affected spaces. This can range from crops not being able to grow or habitats of animals being deemed uninhabitable. Meaning that even the smallest changes in temperature and climate can be devastating for not only us humans but the environment as well.

I chose my data set because I thought it perfectly depicted the wide range of how every country is being affected by climate change. It shows both the deviation and also the temperature change for each year which is incredibly important to get a sense of how much of a rapid change is occurring. For my graphs, I chose to show how the temperature increases or decreases based on the country. The x-axis is the countries themselves in order from lowest

change to highest change. The graph begins at Japan at the point of -0.0339999 and then goes to Australia at -0.413, then finally Georgia at 'nan' because it was not one of the countries I had selected in my array.



```
30
31 x = np.arange(3)
32 y = output
33 fig, ax = plt.subplots()
34 plt.plot(x, y)
35 plt.show()
36
```

Run: final x  
/Library/Frameworks/Python.framework/Versions/3.10/bin/python3 /Users/carolynwynn/PycharmProjects/finalp  
please select a country from the data list, make sure to capitalize the country.Japan  
the temperature change in Japan was -0.03399999999999992  
please select a country from the data list, make sure to capitalize the country.Australia  
the temperature change in Australia was -0.143  
please select a country from the data list, make sure to capitalize the country.Georgia  
the temperature change in Georgia was nan  
[-0.03399999999999992, -0.143, nan]  
[-0.143 -0.034 nan]  
the temperature changed

With this data set, we can see that climate change will impact different regions of the world quite differently. Australia, Japan, and Georgia will all cool to an extent whilst the warmer climates will continue to experience an exponential increase in heat waves and begin to experience more commonized droughts and fires. We need to analyze and possess this data because it gives us an idea of what we must prepare for and it also lets us see into the future to

see how our future environment will be affected. If we can mitigate these disastrous consequences and start to cut down on carbon dioxide and other greenhouse gas emissions then we may be able to help preserve our environment for the future to come.