**SeabornPythonProgramFile Documentation**

**Overview:**

SeabornPythonProgramFile is a python script that visualizes the life expectance of a continent from the year 1952 to 2007, [click here](https://raw.githubusercontent.com/resbaz/r-novice-gapminder-files/master/data/gapminder-FiveYearData.csv) to download the dataset used throughout this program. The script can run on IDEs and Notebooks; please visit the Remark Section to learn how to run script on Notebooks.

Usage:

To make sure you don’t run into an error when trying to use the script, make sure you have the script and the dataset in the same directory, the open the script with your chosen IDE and install all the imported modules in your system. You can execute this pip command “ pip install pands numpy seaborn matplotlib” on your terminal if you have pip installed. Once you have them installed, you can then run the script.

**Modules:**

*import* matplotlib.pyplot

*import* pandas

*import* seaborn

These are the modules used within the script to achieve the end result which is the visualization. The pandas module was used to read in the dataset from the source as a Dataframe while the pyplot method from matplotlib module in the script was used to configure the visualization layout, and saving the visualized data. The seaborn module, which is a module used to enhance the features of the matplotlib module was used to create the heatmap which also generated the visualization figure with an interactive user interface.

**Functions/Methods:**

As a basic script, few methods/functions were used to achieve the end goal.

df *=* pd.read\_csv('gapminder-FiveYearData.txt')

The pandas **read\_csv** method is used to read in the data as a dataframe to the assigned variable

pivot\_table *=* pd.pivot\_table(

    df, values*=*'lifeExp', index*=*'continent', columns*=*'year')

The pandas **pivot\_table** is used to create a pivot table from the dataframe generated already.

plt.figure(figsize*=*(9, 6))

The matplotlib **figure** method is used to size the visualization layout/user interface.

sns.heatmap(pivot\_table, annot*=*True, linewidth*=*0.5, cmap*=*'RdYlBu')

The seaborn **heatmap** method is used to create heat map visualization from the created pivot table.

plt.show()

The show function is used to make the visualization visible to the user.

**Remark:**

This is a minimal python script for a specific /stated goal, which is to visualize the life expectance of continents for given period of years. To be able to run this script on a Notebook, open a kernel from the script and data directory and paste code in a cell, then uncomment the code in line 8 and then run cell.

*# %matplotlib inline #This makes plt plots to be inline if using Jupyter notebook*

Un-commenting helps make your visualization stay inline within your notebook.