How Average Income affects Life Expectancy

The goal of this project is to analyze the relationship between Average Income & Life expectancy. 10 different countries from around the world will be chosen to identify the two categories.

```
Data Source
Australia          3075.910532
Canada              556.257342
Germany            1457.954010
Finland           -1529.175647
France            -5995.936751
United Kingdom     2519.620940
Norway            10019.744682
New Zealand       -5131.093093
Poland           -21706.412402
United States     16733.130387
Name: Distance From Average, dtype: float64
```

Standard Deviation of Each Countries 2020 Average Income Relative to the Average 2020 Income

Project Objectives
The overall goal of this project was to identify if there was a relation between average income and life expectancy. The idea was to understand if the amount of money a person made related to how long they lived. Since both concepts will relate to a person over the entirety of their life, we wanted to see if there was a connection.

Project Inspiration
Travelling is something many people will get to experience throughout the course of their lifetime. From a personal standpoint from visiting countries all around the world and seeing their different ways of life, the goal was to see if there was any relations between the way they live from an economical and lifelong standpoint.

```
                          OLS Regression Results
==============================================================================
Dep. Variable:                    y   R-squared:                       0.752
Model:                          OLS   Adj. R-squared:                  0.734
Method:               Least Squares   F-statistic:                     42.38
Date:              Tue, 25 Apr 2023   Prob (F-statistic):           1.38e-05
Time:                      16:53:50   Log-Likelihood:                -5.4521
No. Observations:                16   AIC:                             14.90
Df Residuals:                    14   BIC:                             16.45
Df Model:                         1
Covariance Type:          nonrobust
==============================================================================
                 coef    std err          t      P>|t|      [0.025      0.975]
------------------------------------------------------------------------------
const         64.2593      2.126     30.223      0.000      59.699      68.820
x1             0.0003    4.3e-05      6.510      0.000       0.000       0.000
==============================================================================
Omnibus:                      1.112   Durbin-Watson:                   0.373
Prob(Omnibus):                0.573   Jarque-Bera (JB):                0.756
Skew:                        -0.060   Prob(JB):                        0.685
Kurtosis:                     1.942   Cond. No.                     1.16e+06
==============================================================================
```
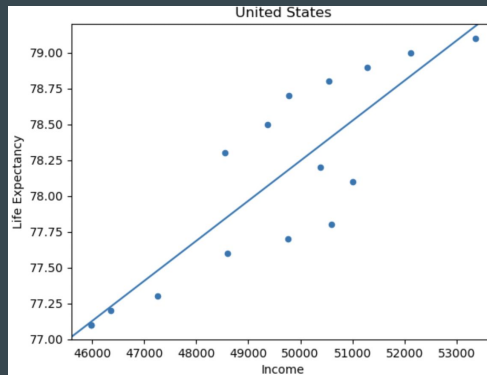
Statistical Relations between Life Expectancy and Average Income for every Country

Key Insight
All countries that were chosen were developed countries with the exception of Poland. This allowed us to compare the economies of each developed Country. Poland is a developing country which allows us to have a base to compare the difference between developed and developing countries.

Linear Regression Graph for United States between Life Expectancy & Average Income

Average Income from 2000-2015 Across the World

Key Insight
Due to the strong connection between life expectancy and average income, it can be determined that the more money one has they can spend on themselves to better their lives. This can include access to better food and water, safer environments and great healthcare.

There is a R-Squared Value of 0.752 to show the relation of Life Expectancy and Average Income!

Youtube Video

https://youtu.be/da-kODeM-SI