

Analyzing the Relationship Between GNI per Capita and Life Expectancy for Canada and United States

Overview

This project aims to analyze the relationship between GNI per capita, population, and life expectancy in these countries

Gapminder Datasets used for this Analysis

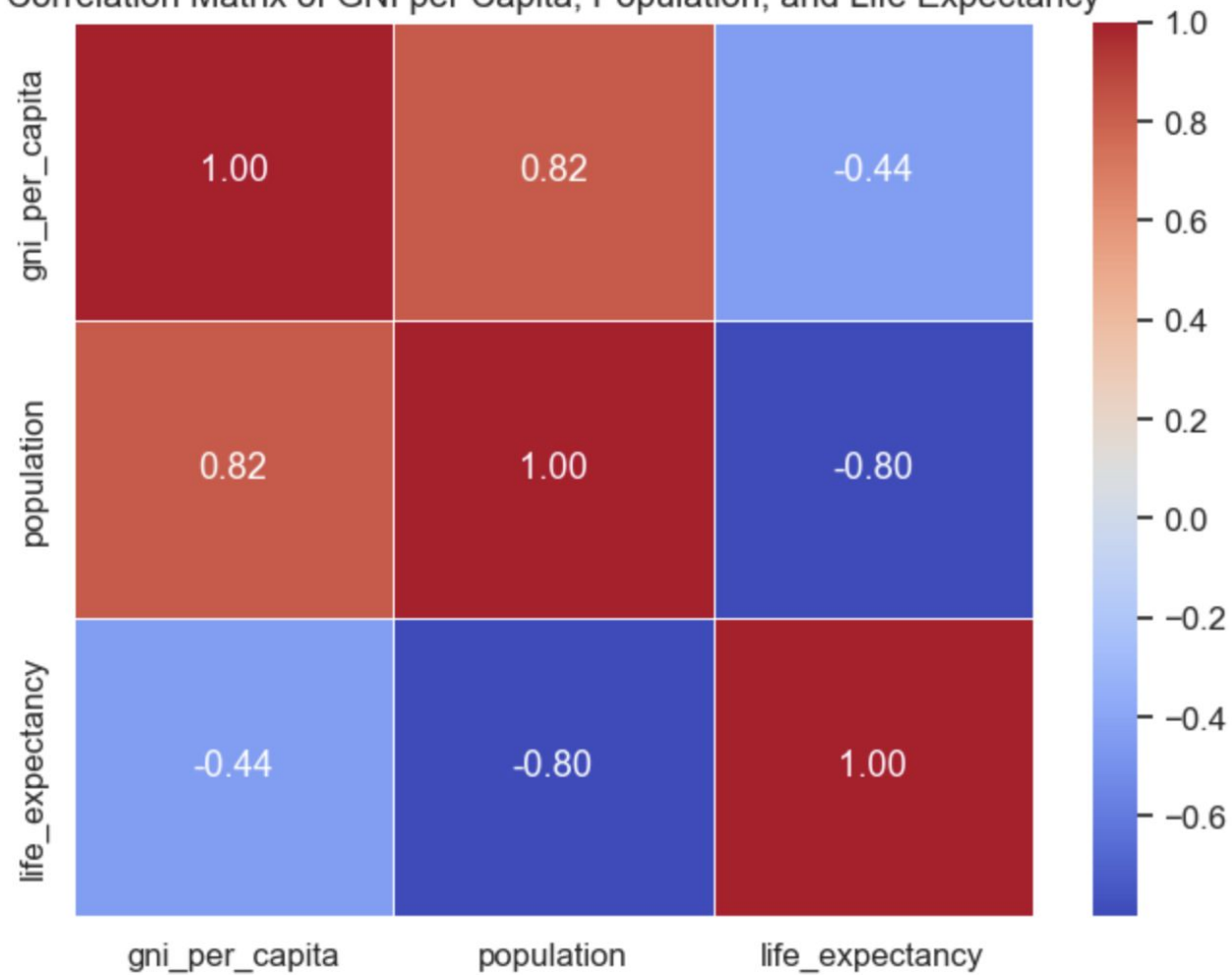
Datasources: Life Expectancy, Population and GNI Per Capita

Years: 2001 to 2030

Countries: Canada, United States

By examining data over time, the project will identify trends and correlations between economic factors (GNI per capita) , population projections and life expectancy outcomes.

Correlation Matrix of GNI per Capita, Population, and Life Expectancy



Correlation Visual Explanation

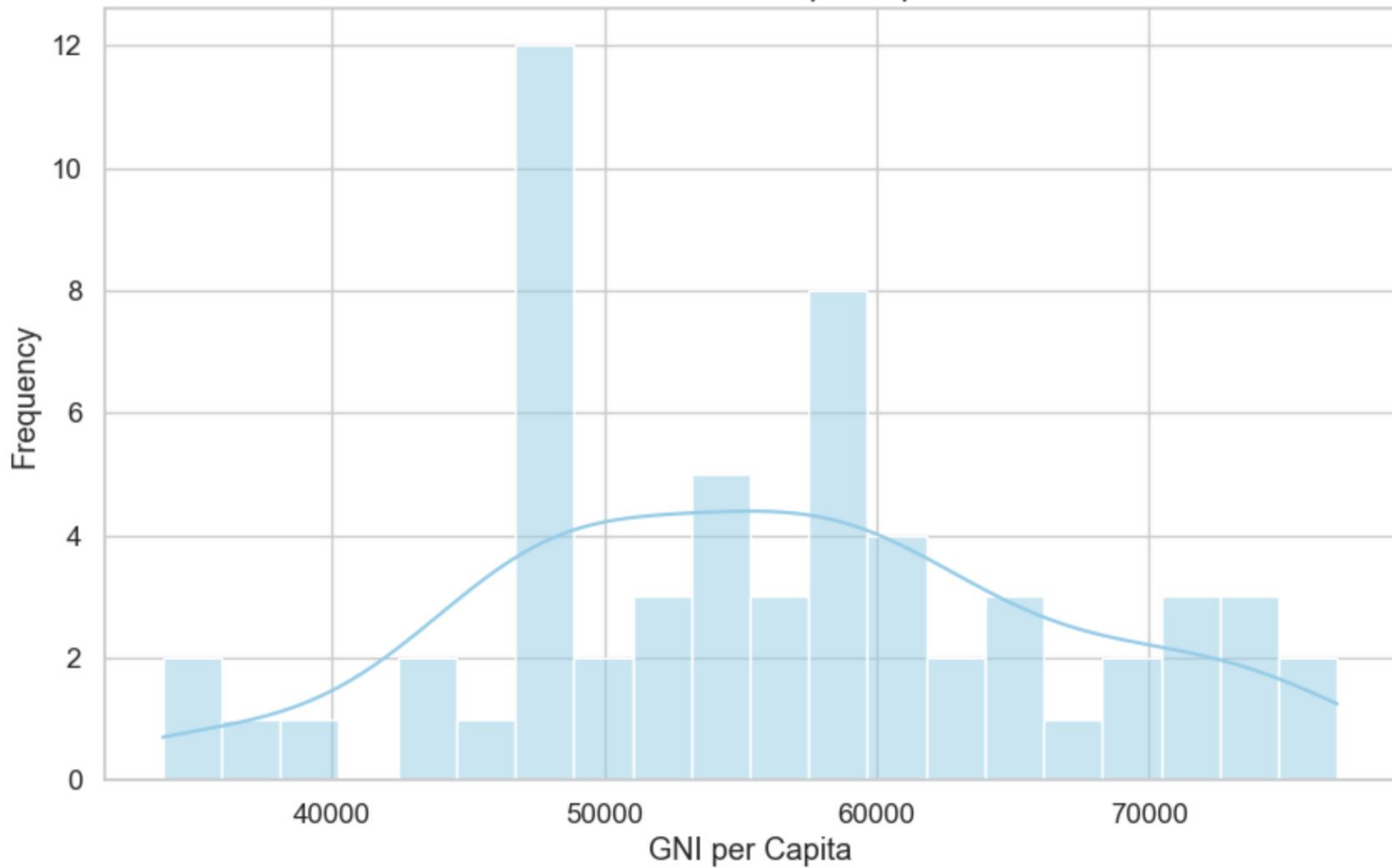
Correlation Analysis

The correlation matrix reveals the following key relationships:

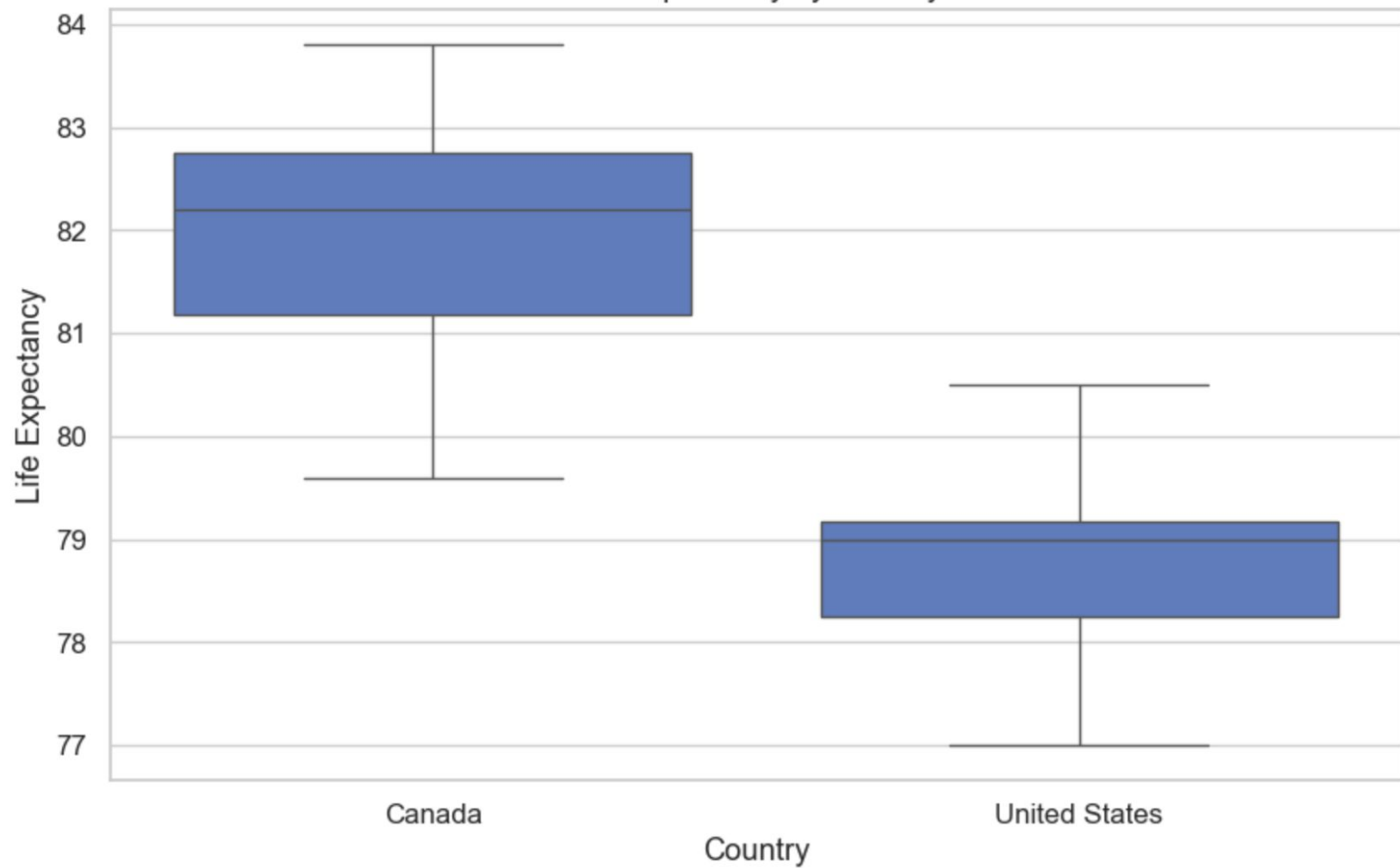
- **Population and GNI per Capita (GDP):** A **positive correlation** suggests that countries with larger populations tend to have higher GNI per capita.
- **Population and Life Expectancy:** A **negative correlation** indicates that countries with larger populations often have lower life expectancy, likely due to disparities in healthcare and regional factors.
- **GNI per Capita and Life Expectancy:** The **negative correlation** between GNI per capita and life expectancy may reflect challenges in wealthier countries, such as lifestyle-related diseases and aging populations.

In conclusion, these correlations highlight the complex interactions between economic factors, population size, and life expectancy across the countries in the dataset.

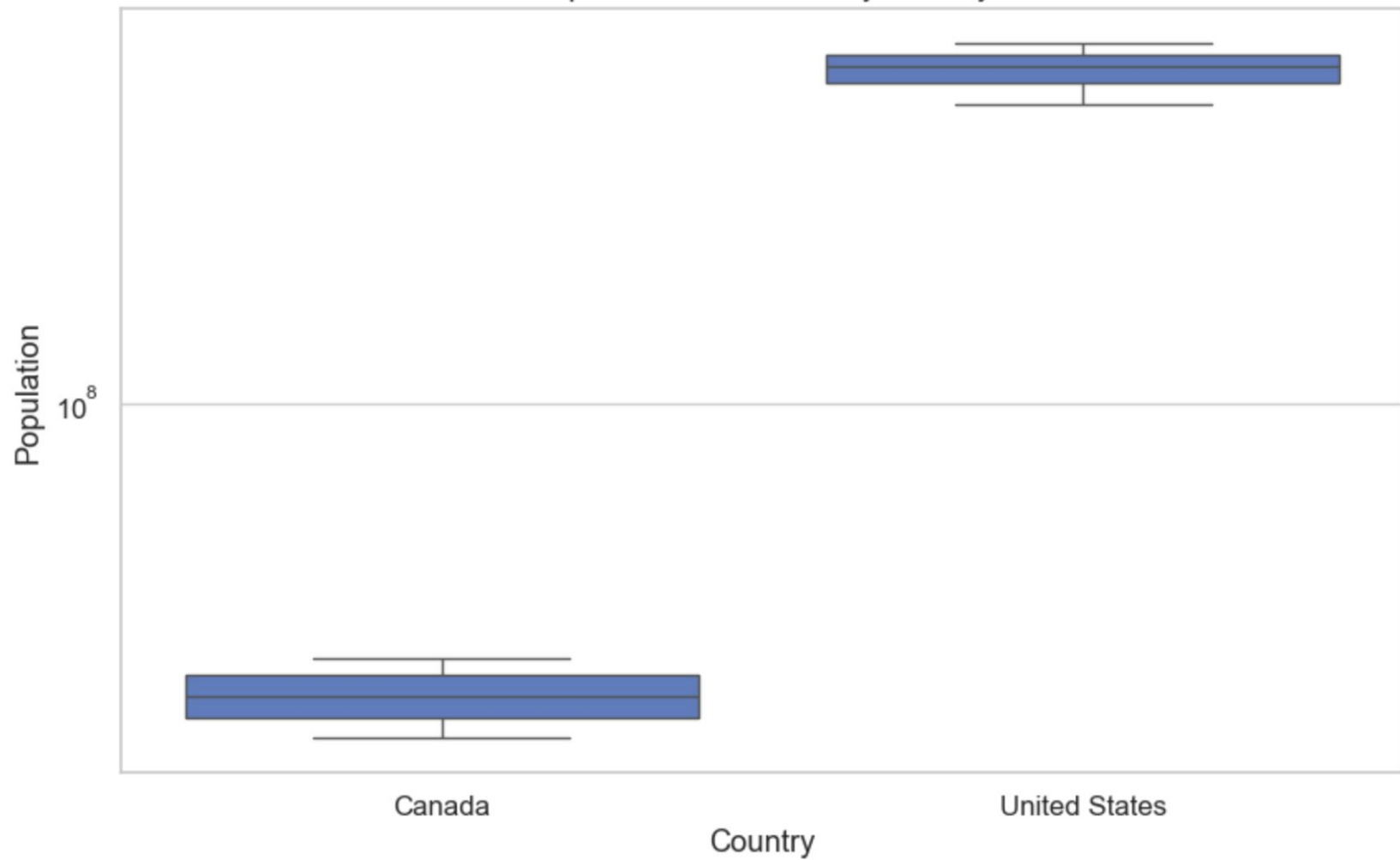
Distribution of GNI per Capita



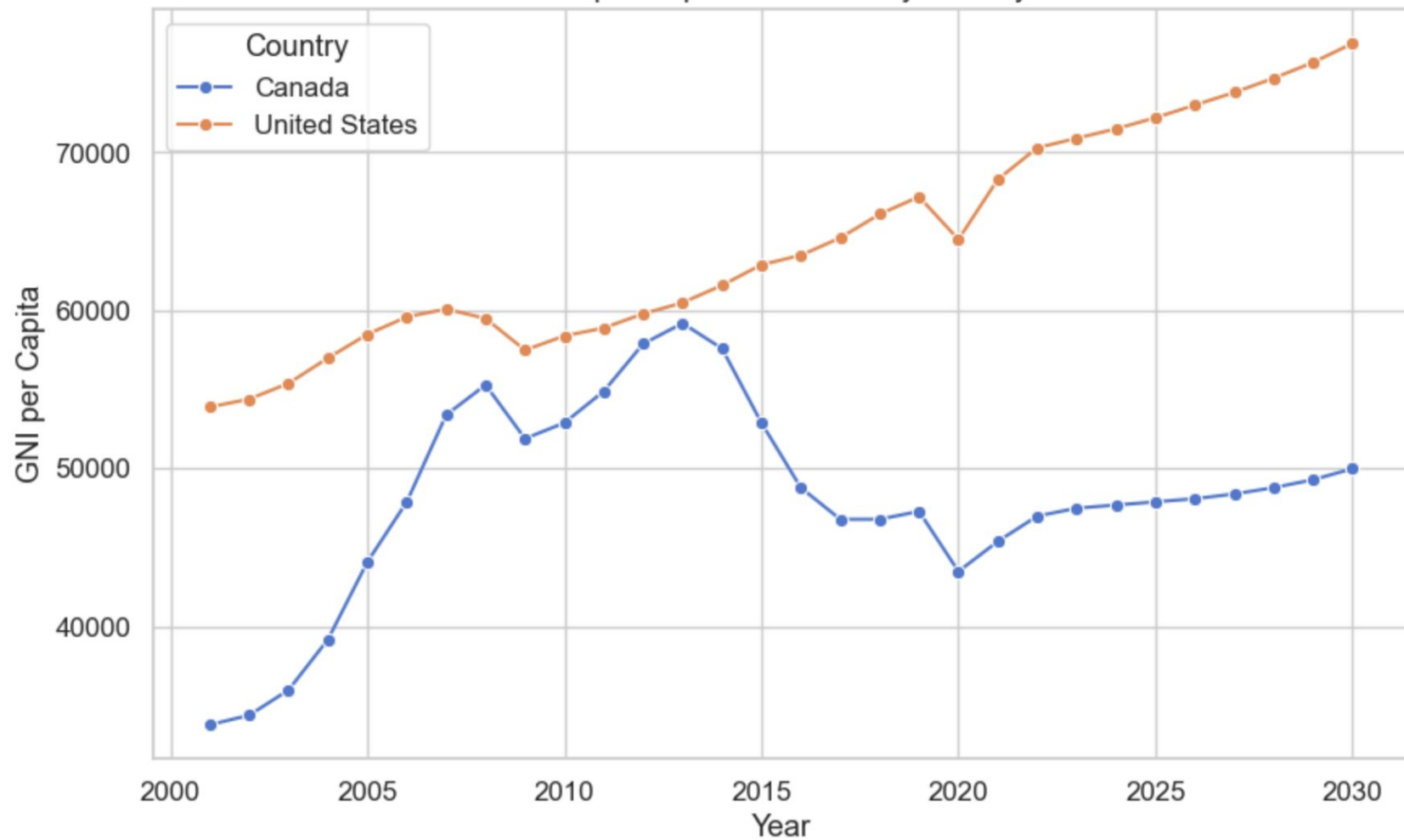
Life Expectancy by Country



Population Distribution by Country



GNI per Capita Over Time by Country



Observations Based on the Analysis

Correlation and Analysis based on the Gapminder dataset between Canada and United States shows below factors

In the analysis of Life Expectancy vs. GNI per Capita, Canada stands out with the highest life expectancy among the three countries. This can be attributed to its strong healthcare system, higher quality of life, and public health policies that promote longer life expectancy.

On the other hand, the United States leads in terms of GNI per Capita and has a significantly larger population. This reflects the country's economic strength driven by its industries, technological advancements, and global economic influence. However, despite the higher GDP and population, the U.S. does not exhibit the same life expectancy as Canada, suggesting that economic prosperity does not necessarily correlate with longer life expectancy.