Week 2 workshop, Tun Linn Thein, 28 Jan 2026

I downloaded GDP Per Capita and Life Expectancy datasets from
https://www.gapminder.org/data/ and used Julius AI for data analysis.

1. Data Overview

Datasets contain historical data from 1800 to 2100 for countries worldwide:
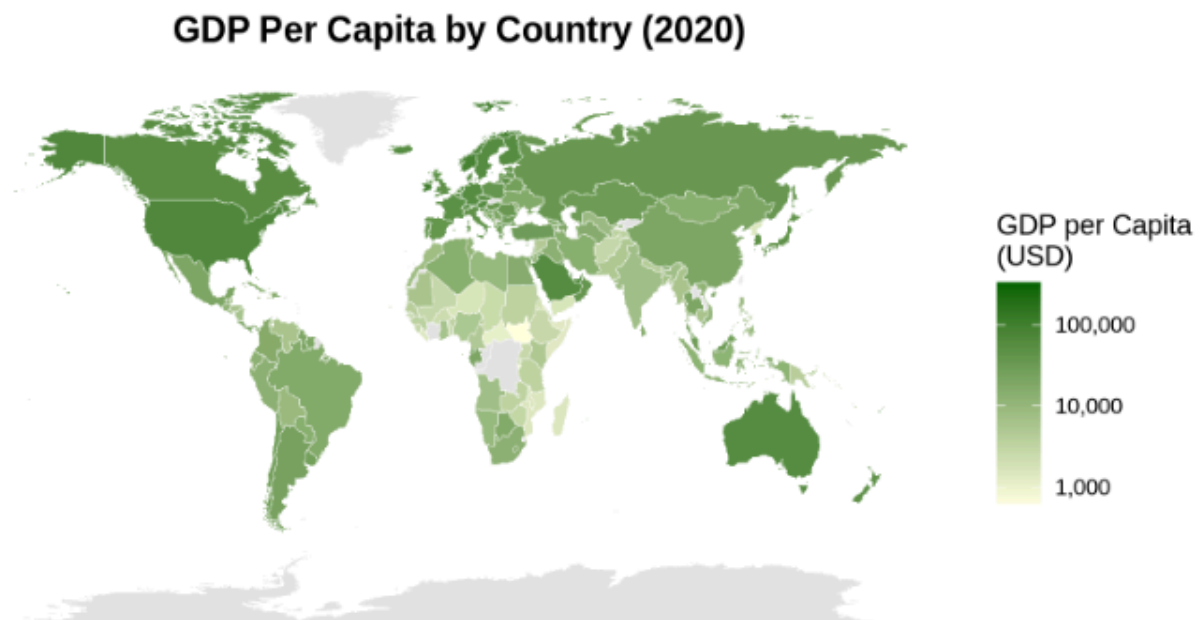GDP Per Capita: 193 countries with GDP values in USD
Life Expectancy: 194 countries with life expectancy in years

Julius AI successfully extracted 2020 data for both indicators, with 193 countries having
complete data for both variables.

2. World Maps for 2020

GDP Per Capita Map (2020):

The map shows 179 countries matched and colored by GDP per capita (log scale). Wealthier
nations (darker green) are concentrated in North America, Western Europe, Australia, and parts
of East Asia and the Middle East. Poorer nations (lighter yellow) are primarily in Sub-Saharan
Africa and parts of South Asia.

Life Expectancy Map (2020):

Life Expectancy by Country (2020)
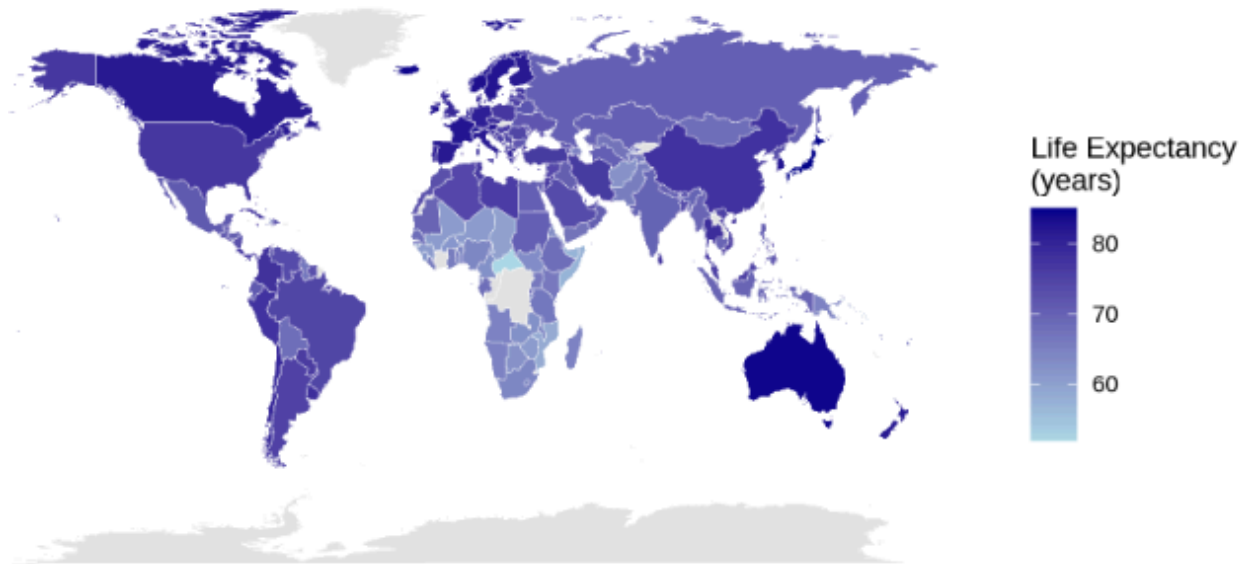
The life expectancy map shows 179 matched countries. Higher life expectancy (darker blue) is found in developed nations across Europe, North America, East Asia, and Australia. Lower life expectancy (lighter blue) is concentrated in Sub-Saharan Africa.

3. Scatterplot: GDP vs Life Expectancy

Relationship between GDP Per Capita and Life Expectancy (2020)
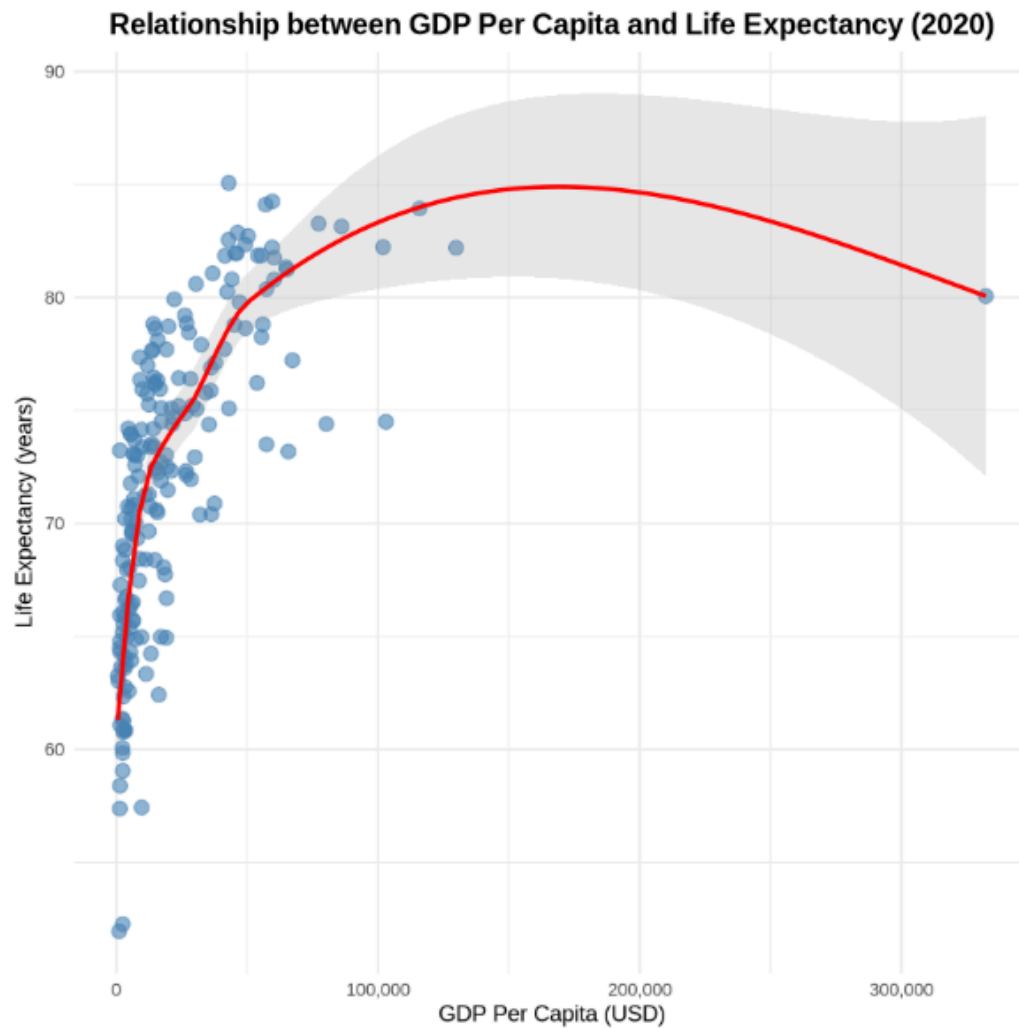
Correlation coefficient: 0.554 (moderate positive correlation)

Interpretation

The analysis reveals a moderate positive relationship between GDP per capita and life expectancy.

Key findings:

- Countries with higher GDP tend to have higher life expectancy
- The relationship is non-linear - most countries cluster at lower GDP levels (under $50,000)
- There are diminishing returns: initial increases in GDP produce larger gains in life expectancy, but beyond a certain threshold (~$30,000-40,000), additional wealth yields smaller improvements

- Life expectancy ranges from ~52 to ~85 years, while GDP ranges from ~$600 to over $330,000
- The red trend line shows the relationship levels off at higher GDP values, suggesting factors beyond wealth (healthcare systems, lifestyle, social policies) become more important for longevity in wealthier nations

4. Reflection about the process of interacting with the AI tools

While the AI can analyse and provide the outputs very quickly, it is important to verify the outputs and interpretations. Even though the prompt is used, no two outputs are the same.