



More People, More Problems?

Project 1

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Allow Me To Introduce...

Oscar The Grouch:

- His home is becoming overpopulated causing him stress
- He is concerned this stress is going to take years off of his life
- Does a higher population correlate to longer or shorter life expectancy?



Is Oscar The Only One Worried?

After further research, I have found that Oscar isn't the only one with this exact question.

Greeley G. (“Gregg”) Miklashek, MD, retired neuropsychiatrist, stress researcher and author of *“STRESS R US”*, seems to believe in Oscar's idea.

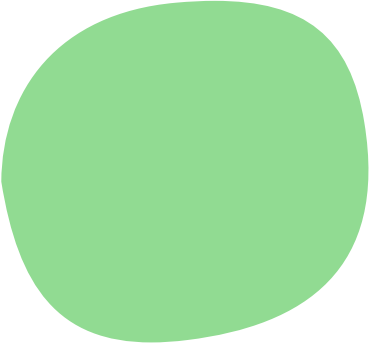
In the article *Population Density Stress Is Killing Us Now!*, author Gregg Miklashek summarizes that,

“human overpopulation and our modern life–style choices are causing physiological changes responsible for our top ten killing “diseases of civilization””

Problem Statement

There is no denying that, globally, we are living longer lives than our ancestors did back in the early 1900s. There is also no denying that our population is growing at an exponential rate. However, is our life expectancy starting to shorten? When it comes to of the human race, there is a lack of clarity on whether a correlation exists between the density in a country's population and the average lifespan of that country's occupants. This project aims to investigate the relationship between a country's population and the average lifespan, and provide evidence to support or oppose the the claim that exponentially growing populations are shortening the average lifespan.

Data Sources



Within this project I will be comparing data on the topics of population and life expectancy for the top 5 most and least populated countries in the world in the year of 2023.

These World Development Statistics derive from Gapminder:

- Population
 - Life expectancy
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Procedure

1. Computed the top and bottom 5 countries according to population recorded in the year 2023

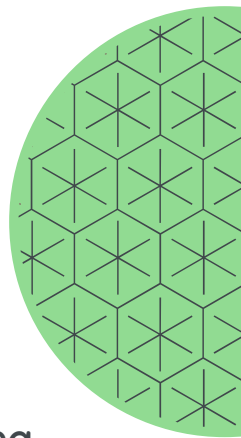
Top 5:

- India
- China
- United States
- Indonesia
- Pakistan

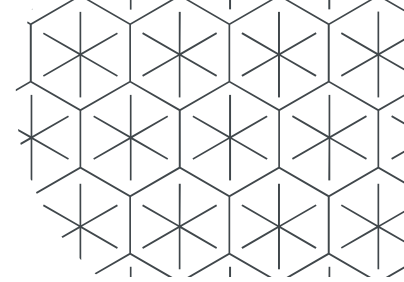
Bottom 5:

- Tuvalu
- Nauru
- Palau
- San Marino
- Monaco

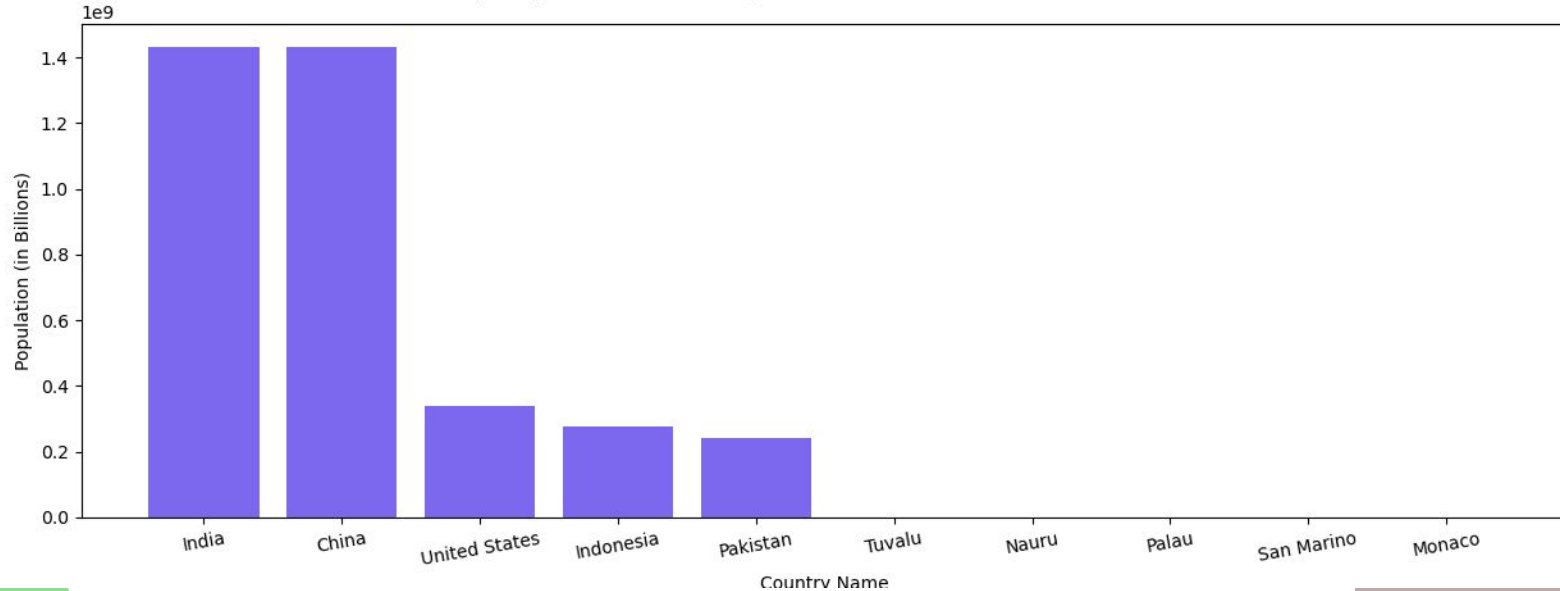
2. Narrowed down the years of exploration from 1950 to 2023 due to missing data.
3. Explore via visuals!



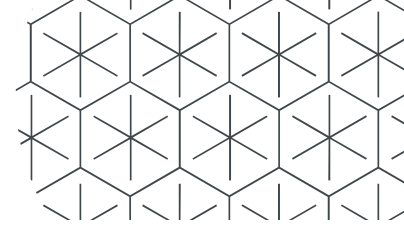
Population Comparison



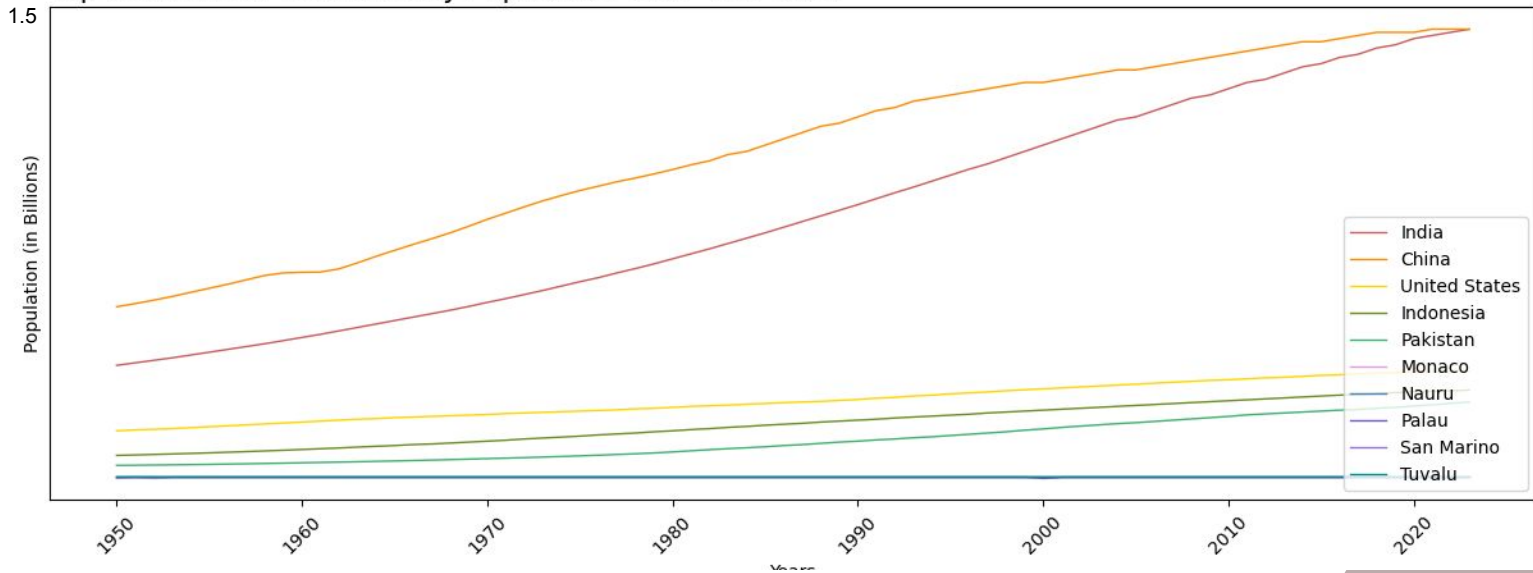
Top & Bottom 5 Countries by Population in the year of 2023



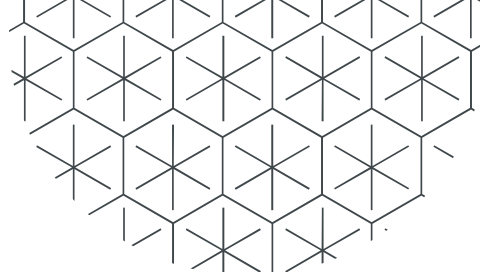
Population Comparison



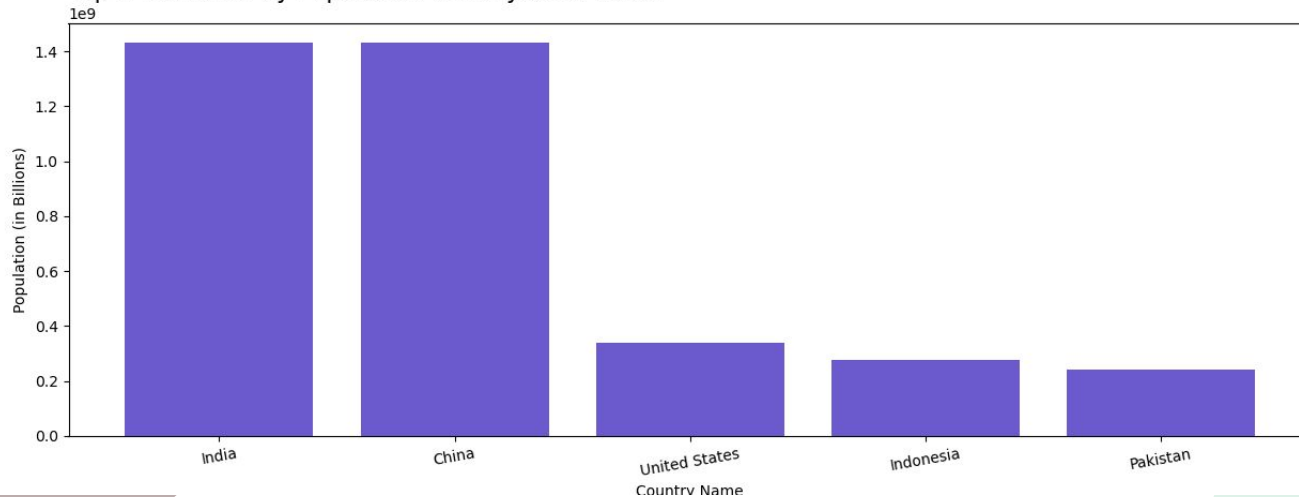
Top & Bottom 5 Countries by Population Over The Years



Top 5 Countries with the Largest Population in 2023

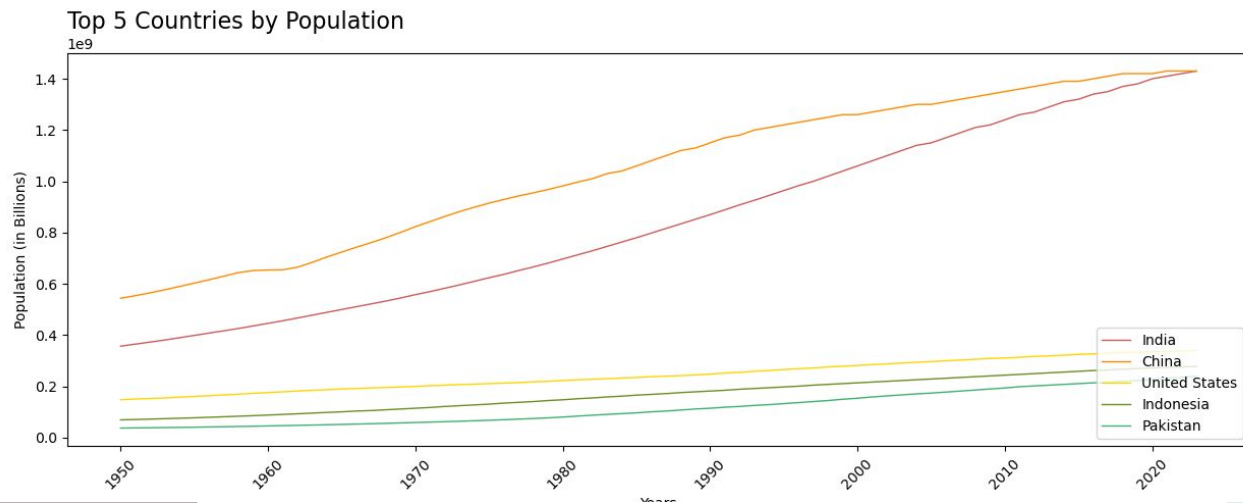
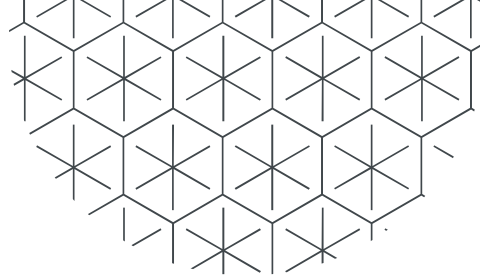


Top 5 Countries by Population in the year of 2023



- India & China have the highest populations
 - 1.43 Billion

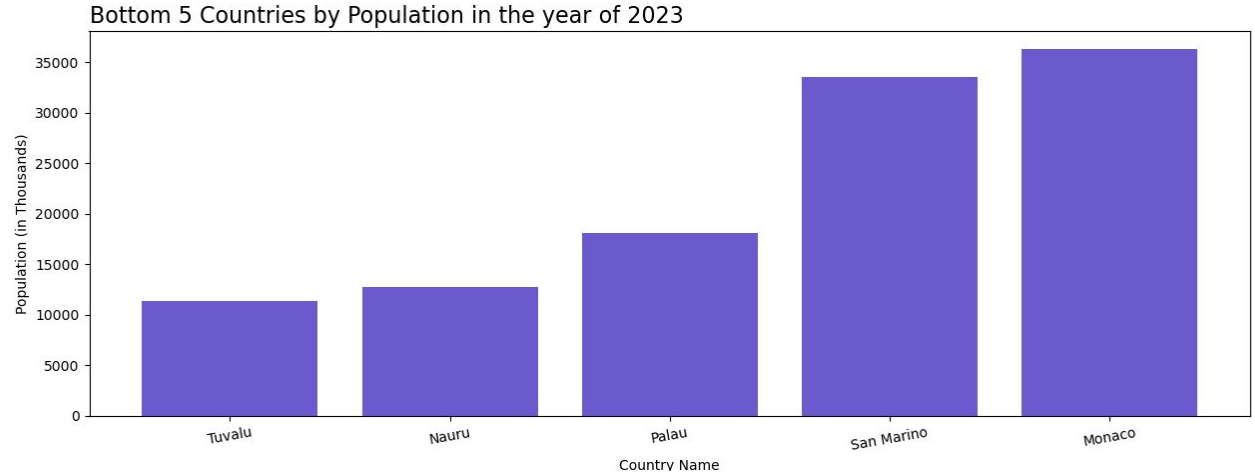
Top 5 Countries with the Largest Population Over Time



- Rapid growth in India & China over the years

Bottom 5 Countries with the Smallest Population in 2023

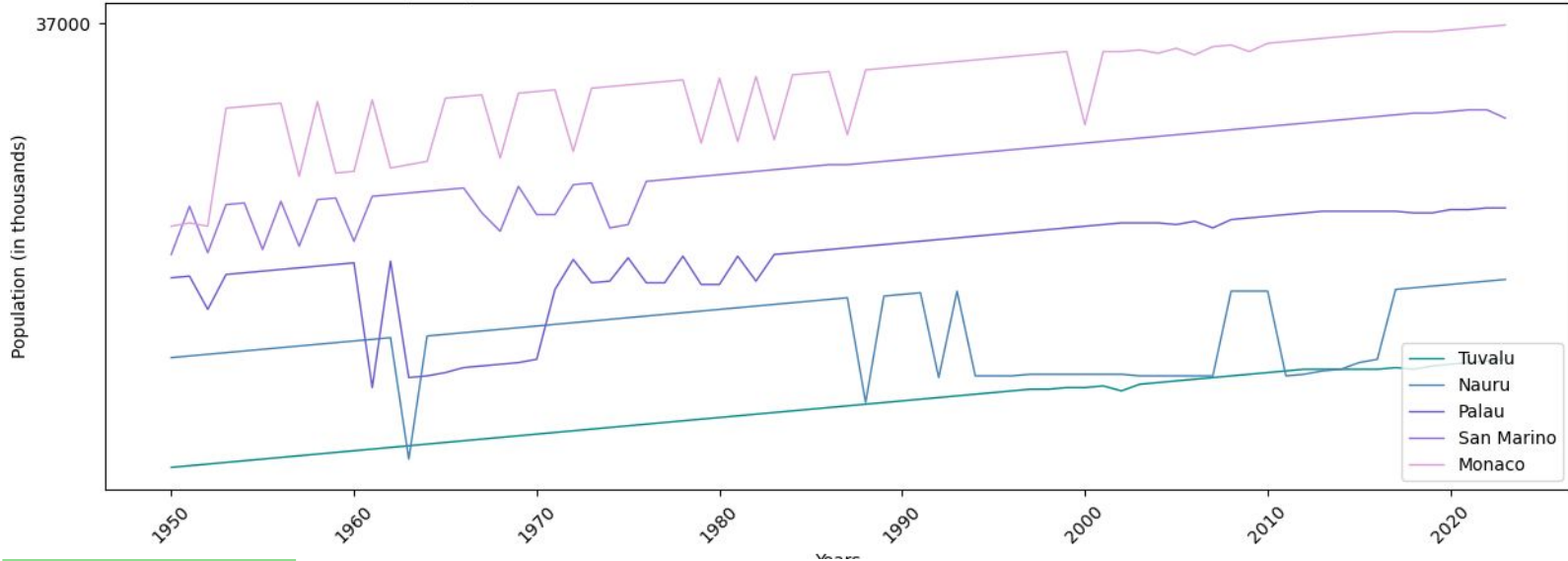
- Tuvalu has the smallest population
 - 11,400 peoples



Bottom 5 Countries with the Smallest Population Over Time



Bottom 5 Countries by Population

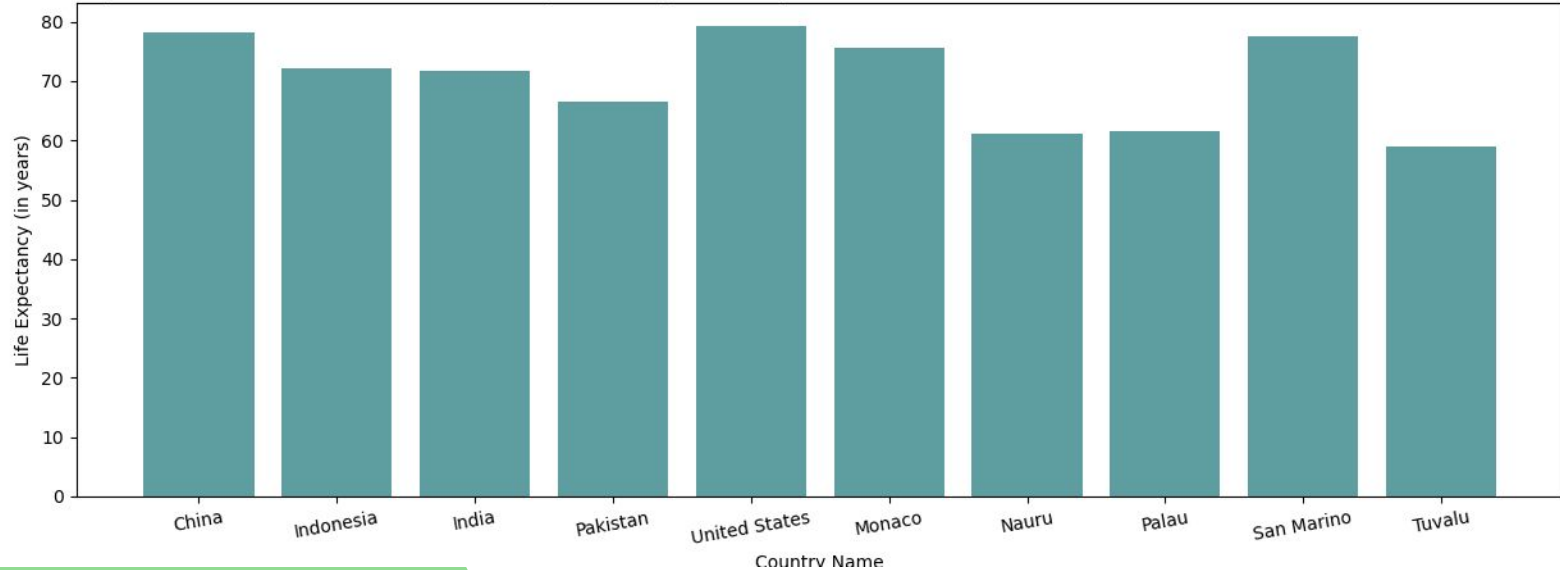


- Inconsistency for all of these countries
 - Result of poor recording? Lost documentation?
- Max population recorded is about 37,000 peoples

Life Expectancy of All 10 Countries in the Year of 2023

✖ | ✖ |

Top & Bottom 5 Countries Life Expectancy in the year of 2023

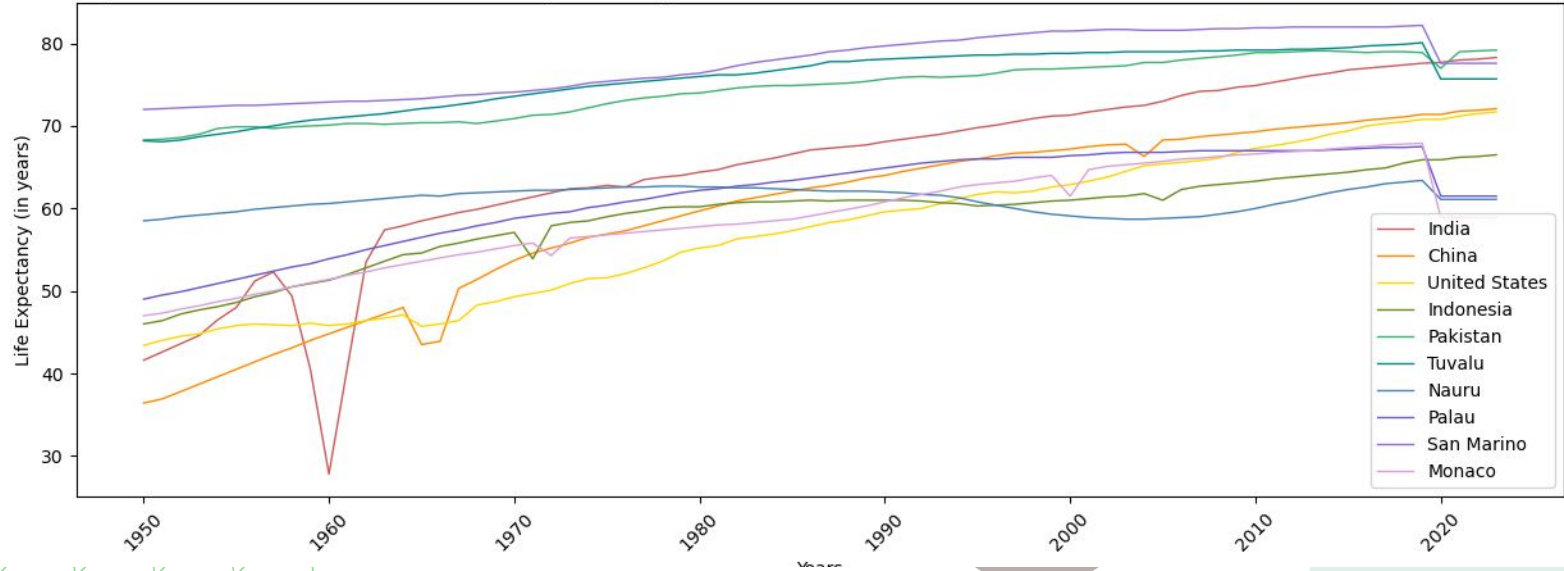


- United States has highest life expectancy
 - 79.2 years
- Followed closely by San Marino
 - 77.6 years



Life Expectancy of All 10 Countries Over the Years

Top & Bottom 5 Countries Life Expectancy Over The Years



Executive Summary

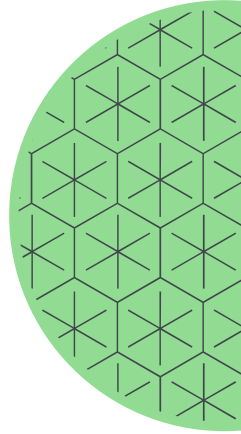
So, do more people nationwide have correlation with the nation's members lifespan?

My conclusion is that there is not a correlation between population density and the life expectancy of those inhabiting the any country. The previous graph paints a pretty clear picture. In this figure we can see that outside of Pakistan (top 5), Tuvalu (bottom 5), and San Marino (bottom 5), the other 7 countries tend to follow the same trend and trajectory, meaning the vast difference in population does not play a role. It is worth noting that those 3 countries, Pakistan, Tuvalu, and San Marino, have always had a much higher life expectancy within the years that have been explored.

I am happy to conclude that Oscar can sleep well in his trash can knowing that, while the others around him may stress him out, it will not lead to his early demise.

Questions Worth Further Exploration

- What is healthcare like in all 10 countries?
 - How does that play a role in the life expectancy?
- What were those 3 countries (Pakistan, Tuvalu, and San Marino) doing differently the rest to have such a high avg lifespan before it started declining?
- The 3 countries with the high life expectancy are not located near each other, yet they follow the same trend. Why?
- When were these countries established? Does that have any correlation to life expectancy?
- In 1960 there is a massive dip in life expectancy in India, why?



Sources

- Gapminder
- Population Density Stress Is Killing Us Now!
- Geeksforgeeks

