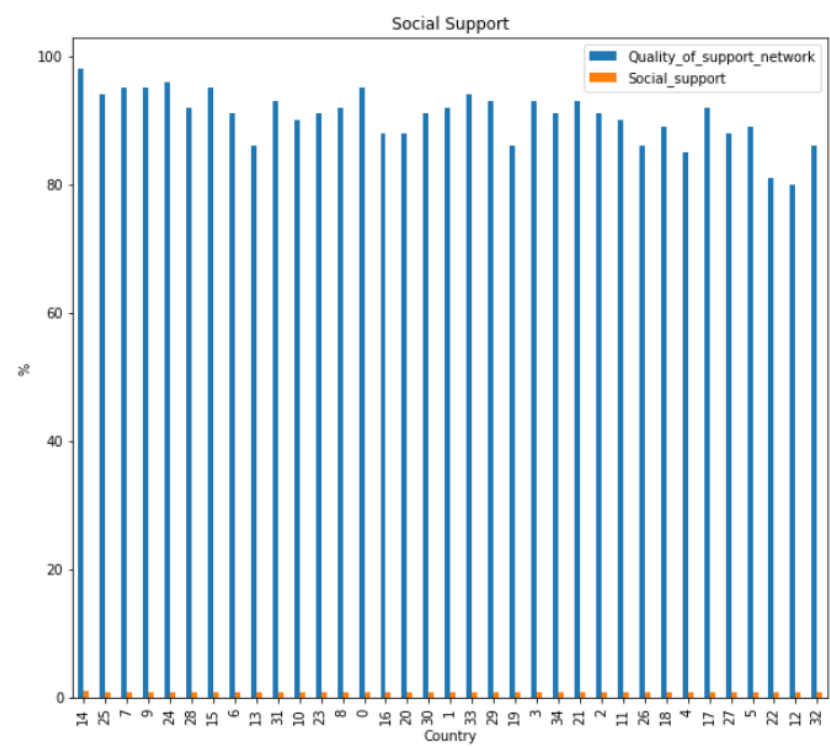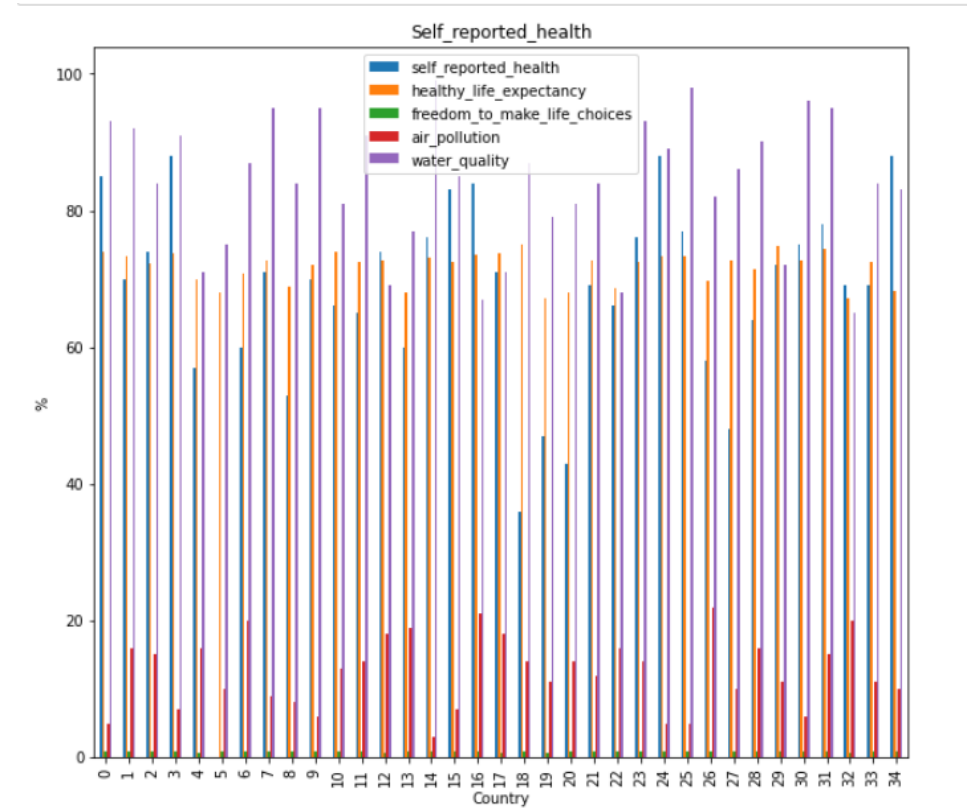# Data Analysis

For this project, we focused on finding work life balance in OECD countries. We wanted to find the value of the economy, quality of life, health, environment and the work life balance of the OECD countries. We found strong correlations on multiple items and plotted the best countries in each category.

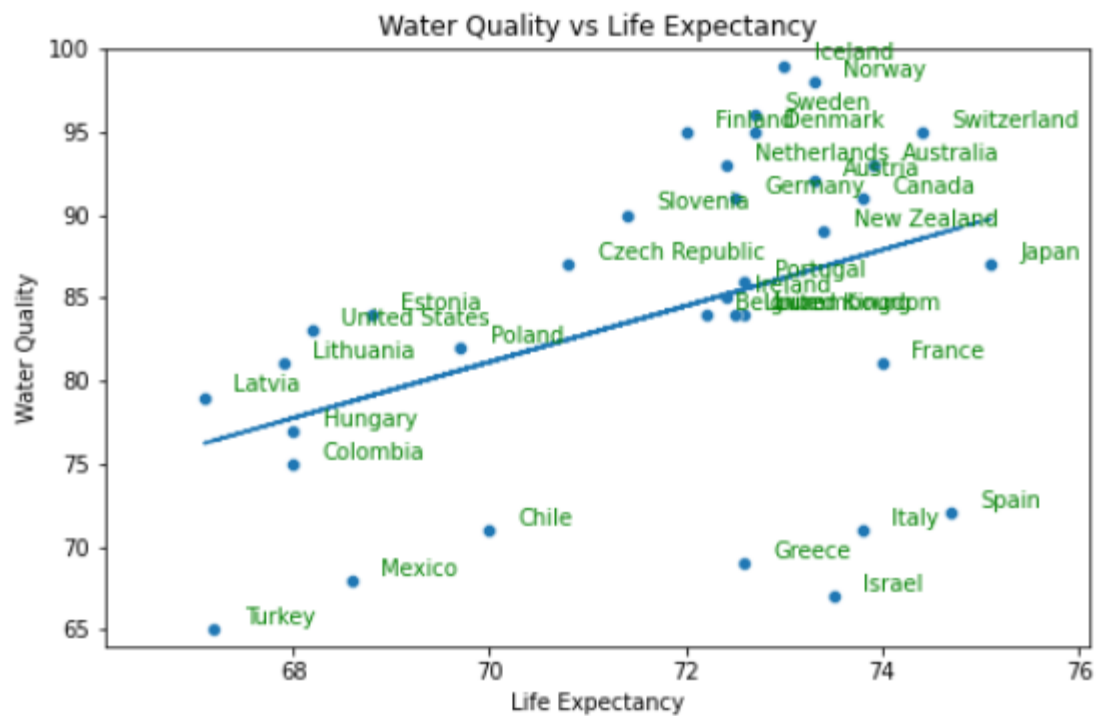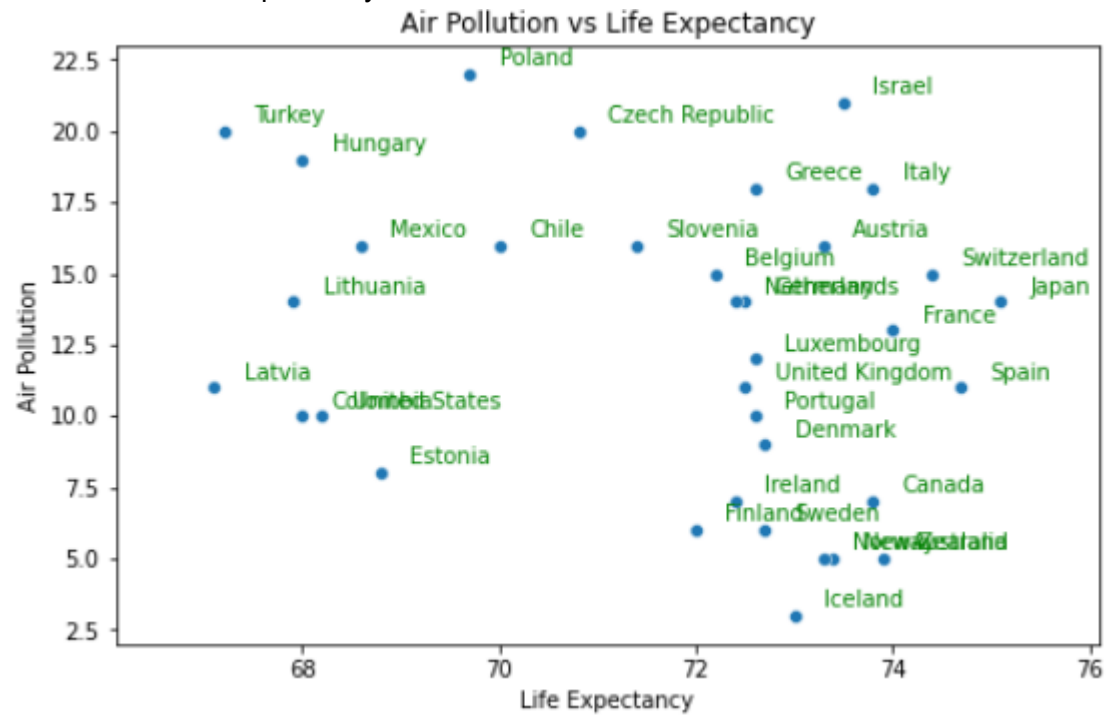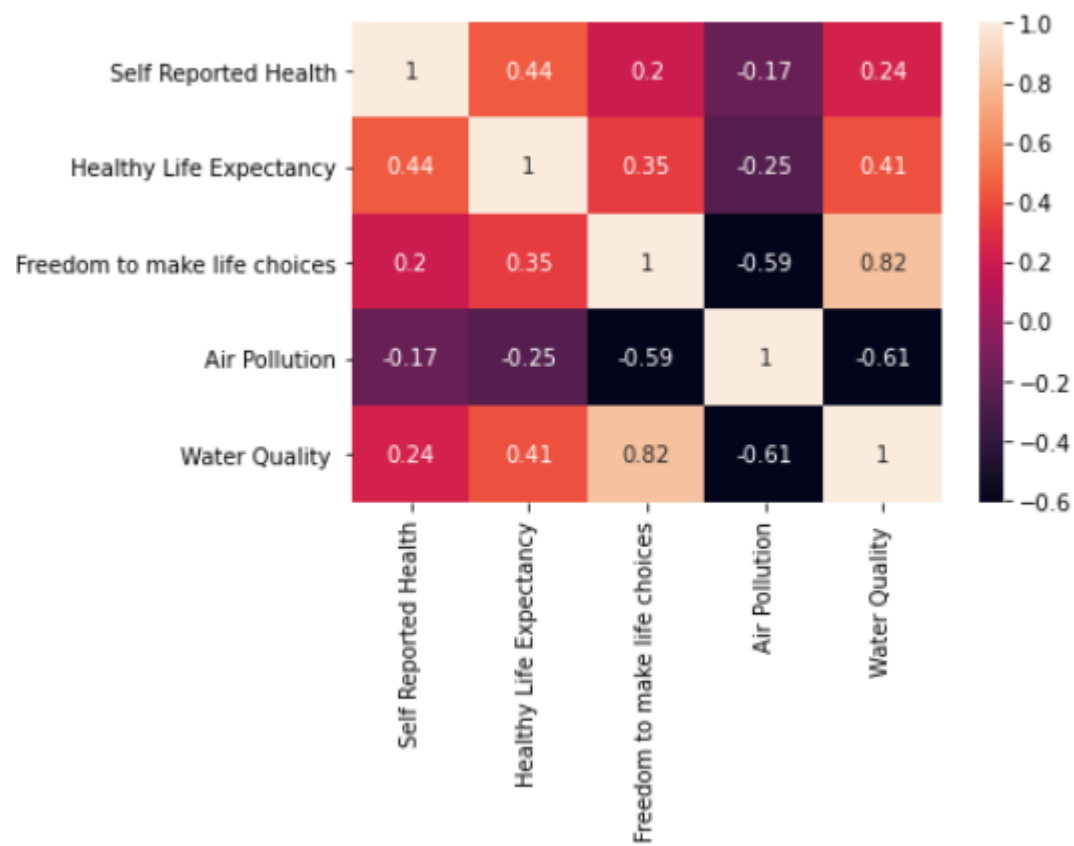## Quality of life

Quality of life correlation:

Health

Self_reported_health

Social Support

Environment effect on health
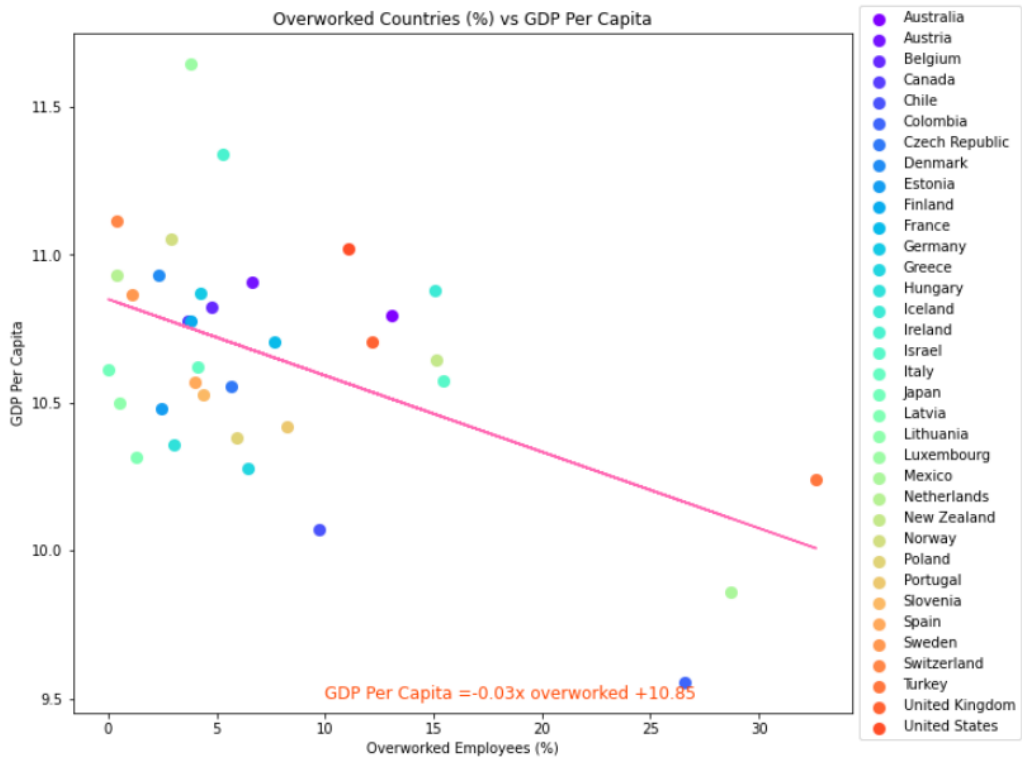
Environment vs Life expectancy

Overworked Population and Corruption impact on GDP analysis

Observations and Insights – Economy Analysis
- Out of the OECD Countries the range of Logged GDP per capita is minimal (2.09 units)
- The county with the most overworked population is Turkey with 32.6% of the surveyed population working more than standard. Whereas, Switzerland recorded the lowest in the study, with only 0.32% of the surveyed population working more than the standard hours. The regression analysis shows that with a marginal increase in the surveyed population working overtime, the country's overall GDP falls. The correlation analysis achieved a Correlation Coefficient of -0.51.
- The country with the most overall perceived corruption is Portugal, with 88.7% of the population surveyed viewed their country to be corrupt. The country with the least recorded perception of corruption is Singapore with only 0.082% of the population surveyed believing their country to be corrupt. The regression analysis shows that a marginal increase in perception of corruption, the GDP of a country falls. The correlation analysis achieved a Correlation Coefficient of -0.67.
- In hindsight, Australia ranked 8th in the list of OECD countries with the most overworked population and in the regression analysis placed itself in an average location suggesting there is a room of improvement. Similarly, in regards to perception of corruption Australia fared average among other OECD Countries. Countries that performed better than Australia include from which Australia can review their policies and introduce into our own country include:
  - Switzerland
  - The Netherlands
  - Lithuania
  - Sweden,
  - New Zealand, and a few others.

The Correlation Coefficient of the Perception Corruption % vs GDP Per Capita is -0.52

Overworked Countries (%) vs GDP Per Capita

GDP Per Capita =-0.03x overworked +10.85

Legend: Australia, Austria, Belgium, Canada, Chile, Colombia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Latvia, Lithuania, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom, United States

The Correlation Coefficient of the Perception Corruption % vs GDP Per Capita is -0.67

Perception of Corruption x100 (%) vs GDP Per Capita

GDP Per Capita =-1.13x corruption +11.32

Legend: Australia, Austria, Belgium, Canada, Chile, Colombia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Latvia, Lithuania, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom, United States