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Table of Contents

[Chapter 1 Introduction 2](#_Toc152530582)

[Description 2](#_Toc152530583)

[Hypothesis 2](#_Toc152530584)

[There is a correlation between intelligence, as measured by average IQ scores, and a variety of socioeconomic factors, including literacy rates, the HD, educational attainment (School Years), and GNI. 2](#_Toc152530585)

[Data Overview 2](#_Toc152530586)

[Data limitations 2](#_Toc152530587)

[Chapter 2 Unit testing 3](#_Toc152530588)

[Chapter 3 Data analysis 3](#_Toc152530589)

[Chapter 4 Conclusion 3](#_Toc152530590)

[Chapter 5 Table of figures 3](#_Toc152530591)

[Chapter 6 References 3](#_Toc152530592)

# Introduction

## Description

While selecting the dataset to analyse for the coursework, I came across one that included a country's average IQ along with other metrics like its literacy rate, HDI (Human Development Index), and the number of Nobel Prizes it has received (Mlippo, 2023).

I want to explore the correlation between those variables to establish the connection between an average intelligence level of a country and its socio-economic development.

## Hypothesis

There is a correlation between intelligence, as measured by average IQ scores, and a variety of socioeconomic factors, including literacy rates, the HD, educational attainment (School Years), and GNI.

## Data Overview

After removing erroneous and null data, I was left with 179 countries that had information about their region, which can be seen in figure 1.



Figure - Regions in the data set

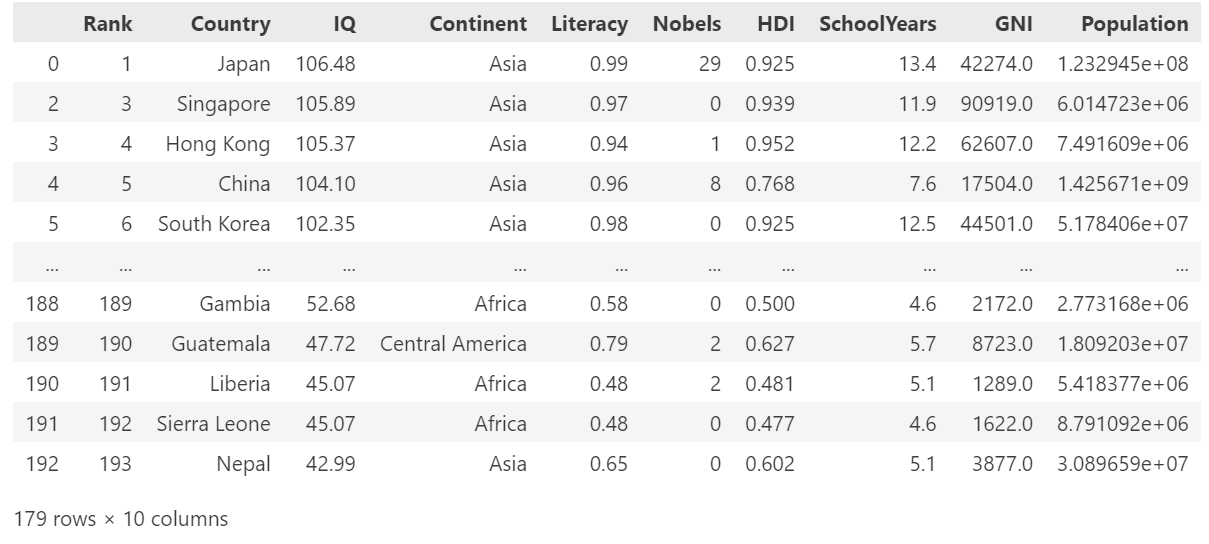


Table - Dataset example

### Data limitations

Unfortunately, the dataset has not been updated completely and includes data from 2021 (the HDI and GNI) that were taken from an earlier dataset that the same person published in 2021. In order for my conclusions to be legitimate, I have to assume that both of these parameters haven't changed significantly since then.

Although I am unable to do a detailed study at the city level due to the limitation of my dataset, this is a rare chance to obtain major insights at a larger continental size. Focusing on entire continents allows me to look at the ways in which regional dynamics, educational systems, and economic issues as a whole influence differences in average IQ scores.

# Unit testing

# Data analysis

Figure 2 shows how the average IQ of different countries varies noticeably. There is a significant gap between a first-world country like the United States, where the average IQ is 99.52, and a third-world country like Ghana or Togo, where the average IQ is 58.16 and 59.83, respectively.

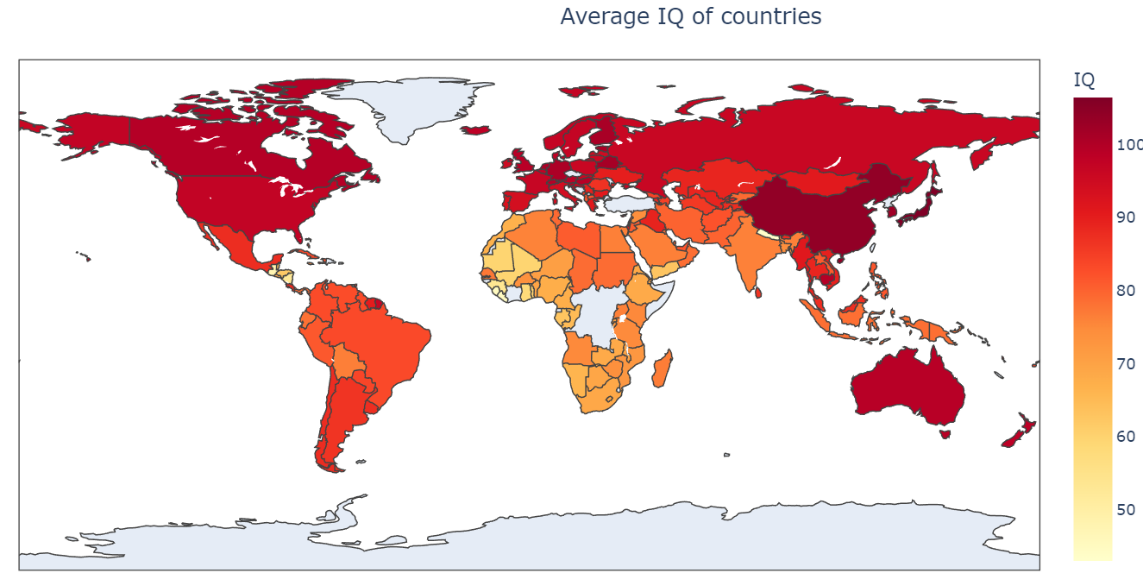


Figure - Coloured world map with countries' IQ

We cannot draw the conclusion that a continent significantly influences average IQ levels since, within Asia, IQ values differ significantly between India and China (76.24 and 104.1, respectively).

# Conclusion

# Table of figures

[Figure 1 - Regions in the data set 2](https://qmulprod-my.sharepoint.com/personal/ec22805_qmul_ac_uk/Documents/Documents/Year%202/Software%20Practices/ProfessionalSoftwareModule/Coursework/Report/Report%20(2).docx#_Toc152455062)

[Table 1 - Dataset example 2](https://qmulprod-my.sharepoint.com/personal/ec22805_qmul_ac_uk/Documents/Documents/Year%202/Software%20Practices/ProfessionalSoftwareModule/Coursework/Report/Report%20(2).docx#_Toc152455114)

# References

Mlippo, 2023. *Average global IQ per country with other stats.* [Online]   
Available at: 25  
[Accessed https://www.kaggle.com/datasets/mlippo/average-global-iq-per-country-with-other-stats November 2023].