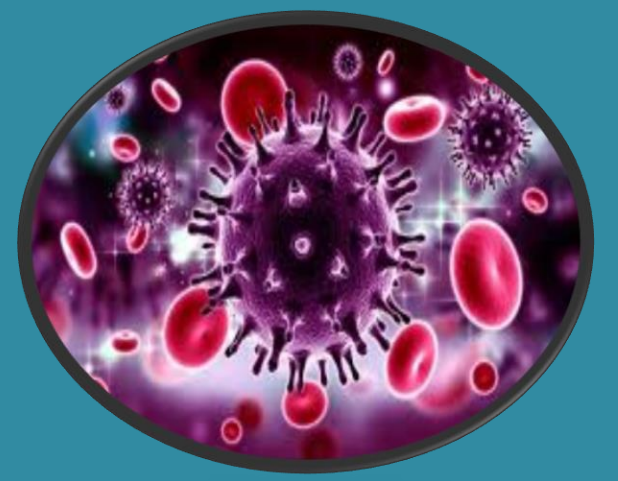# HIV analysis

Study of HIV epidemiology indicators and treatments for children and adolescents.

Introduction

HIV (human immunodeficiency virus) is a virus that attacks cells that help the body fight infection, making a person more vulnerable to other infections and diseases.

We wanted to find out how widely this virus has spread and how effective has treatment been in the years 1990- 2019.

Objectives

The driving vision of our project was to:

- Analyse how the number of children with HIV changes depending on the continent, sex, age(0-19) and the year.

- Analyse the antiretroviral treatments that have been conducted depending on different features

Datasets

Dataset 1 (11290 KB): It has information about HIV depending on the continent, sex, age(0-19) and the year (1990- 2019).

Dataset 2 (177 KB): It contains the coverage of antiretroviral treatment (ART) among children(0-14 years) with HIV.

Conclusions

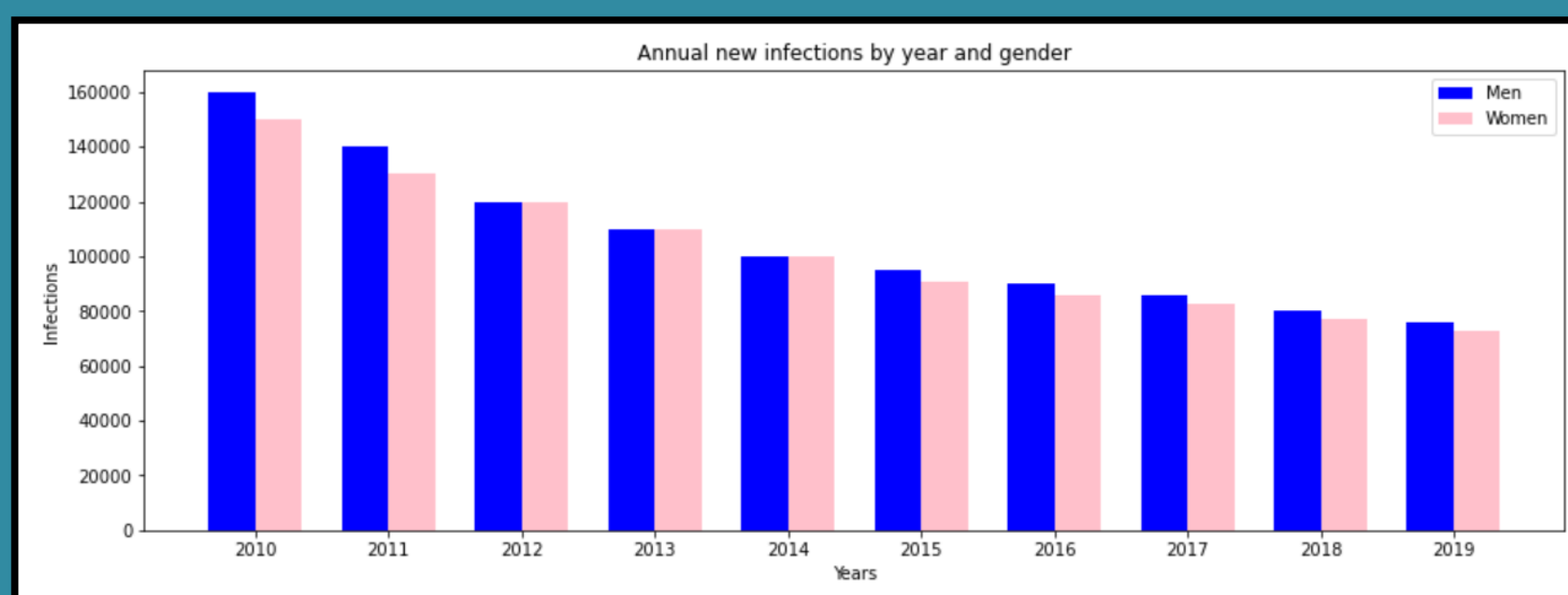In the course of the project, we succeeded in:
- Cleaning the data (more difficult task in our project).
- Plotting.
- Converting values to integers.
- We managed to achieve our objectives and make good conclusions depending on sex, country and years.

Moreover, we found out that we need to have a clear understanding of what kind of data we want to analyze to avoid weird graphs.
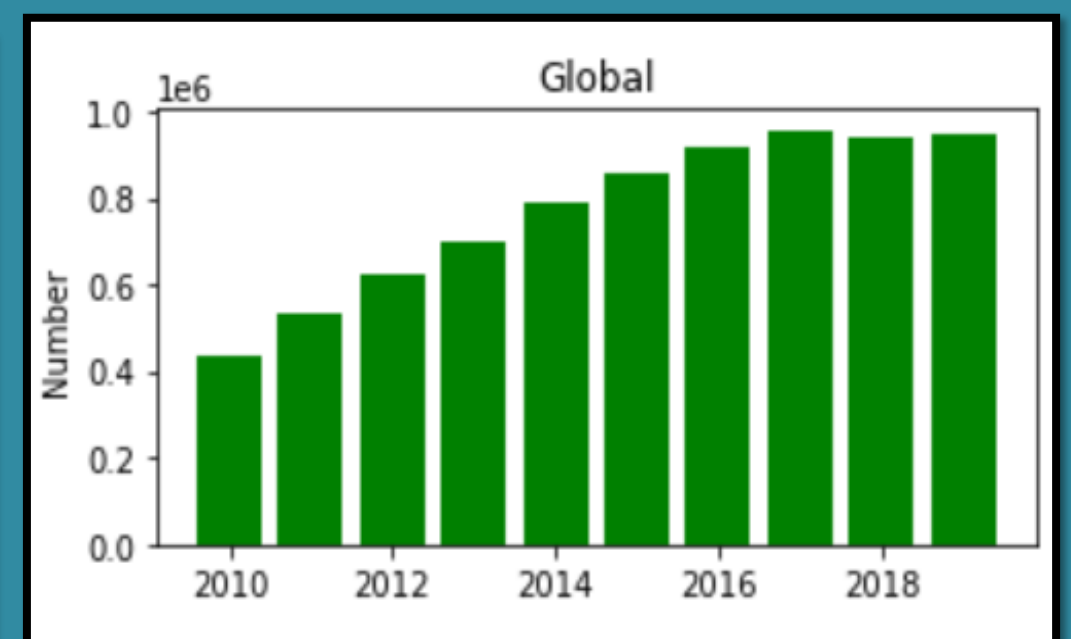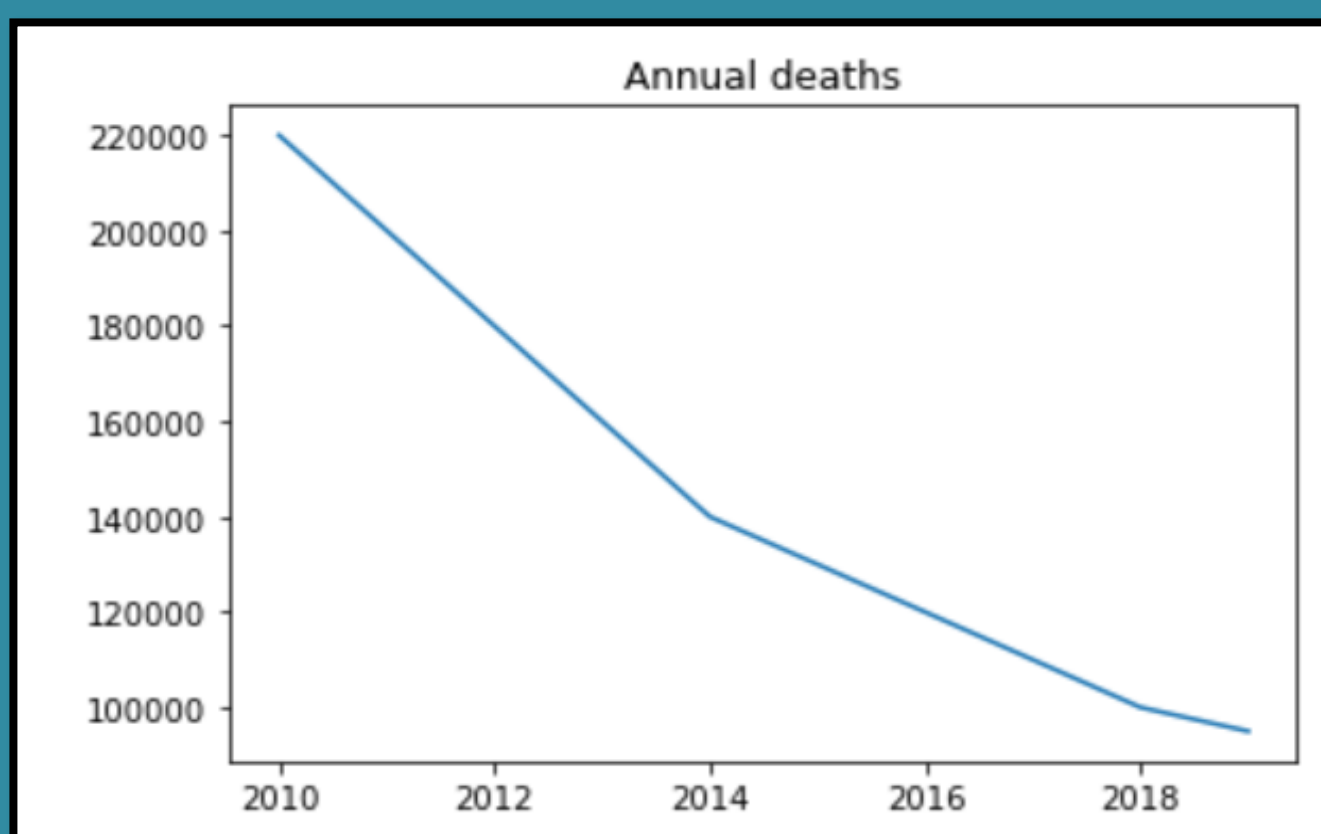
Discoveries

Only global values are shown.

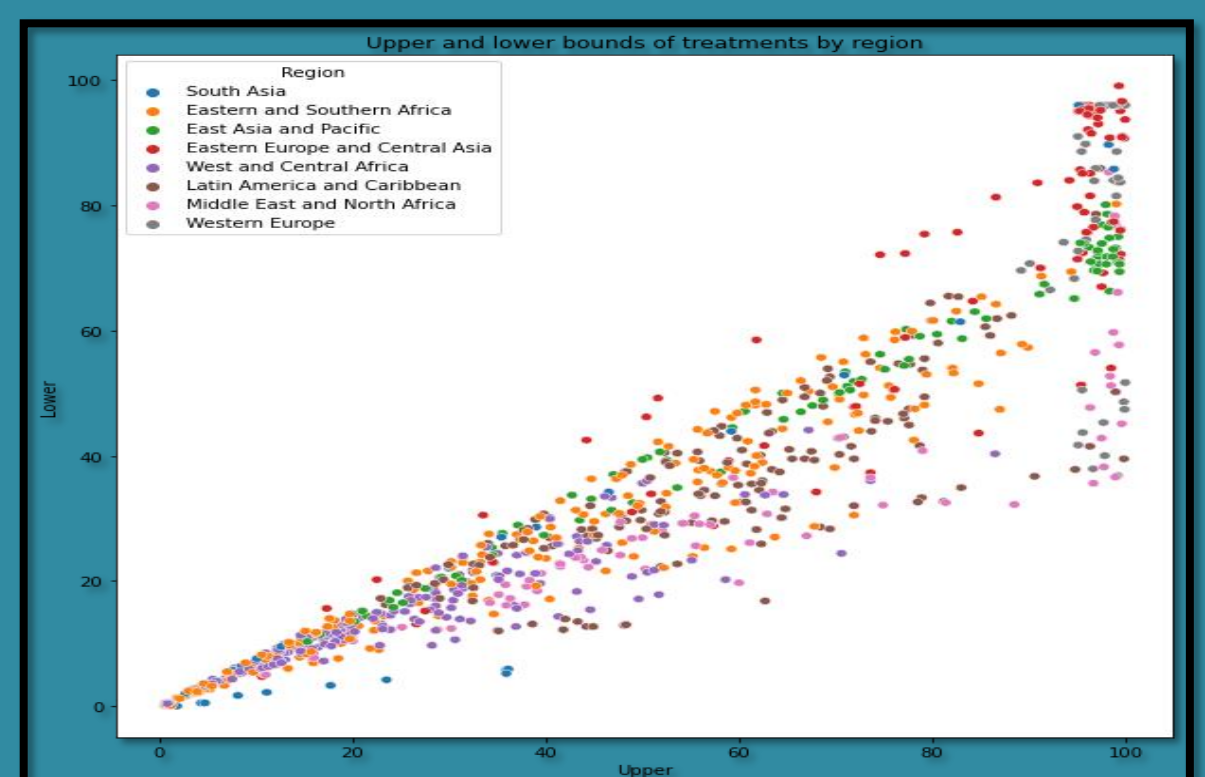(Specific country graphs can be seen in the repository)

ANNUAL NEW INFECTIONS CAUSED BY HIV: Males' values are a bit greater than females 'ones.

NUMBER OF TREATMENTS COVERED: Increasing with the years.

ANNUAL DEATHS CAUSED BY HIV: Fortunately this number has decreased over the years. In 2010, there were 220000 children deaths and in 2019 it decreased to 95000.

PERCENTAGE OF TREATMENTS COVERED: Lowest values can be seen in the case of South Asia, while people in Eastern Europe and Central Asia have higher values.

Yaiza Rubio Chavida
Kristjan Pekk
Pärt Alango

UNIVERSITY OF TARTU · UNIVERSITAS TARTUENSIS · 1632