

COMP 3100 Project Iteration 1

Human Height Visualizer

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Introduction

For this project, we will be creating a data visualization system using the public Kaggle dataset 'Height of Male and Female by Country 2022' by 'Majyhain'. The dataset is a comma-separated-value (csv) file containing the average heights in both metric and imperial units for both males and females of each country. It contains a total of six (6) columns: the first of which correspond to the ranking of the country's average height in descending order with the tallest average being ranked first (1st), the name of the country, the average male height in cm, the average female height in cm, the average male height in feet and the average female height in feet.

The goal of this project is to create a visualization of the dataset allowing users to view the ranking of average human heights for each country, compare the average human heights of each country using human-shaped graphics corresponding to that country's average height and finally to compare the user's own height amongst the human heights in the dataset.

Proposal

As stated in the introduction, the overall idea of this project is to create a visualization of human height by country for viewing and comparison purposes using the public Kaggle dataset mentioned. The default view will include the visualization of average human heights for each country using a male shaped graphic behind a contrasting female shaped graphic corresponding to the average male and female heights for that country respectively. The default view will attempt to visualize the different heights horizontally across the screen sorted by their ranking from tallest to shortest. The human shaped graphics will be selectable which highlights and freezes them on screen allowing the user to compare that country's average human height with the others by scrolling horizontally. Lastly the user will be able to enter their own height in either metric or imperial units which will create a new human graphic corresponding to the inputted height allowing the user to compare their own height with the countries of the world.

Functionalities

Manipulated Objects:

- dataset human height
- user human height

Listed Functionalities:

- Reading entries from the dataset to determine number of human-shaped graphics to draw
- Reading rank from each entry to determine sorting order for the default view
- Reading average male/female height from each entry to determine the y-scale of each human-shaped graphic
- Reading height in metric and imperial units to allow visualization of different units
- Allow users to swap between viewing only male heights, only female heights or both male and female heights of each country.

- Drawing contrasting horizontal lines across all human-shaped graphics corresponding to the tallest and shortest males and females.
- Selectable human-shaped graphics which highlights and freezes the graphic allowing that country's average height to be compared by scrolling horizontally.
- Creating a new entry corresponding to the user's own height allowing the user to compare their own height amongst the country's averages.
- Deleting the newly created entry corresponding to the user's own height allowing the user to return to the default view.
- Reading data from the dataset to generate statistical data to be analyzed, e.g selecting a human shaped graphic displays the selected height's percentile among the dataset to the user.

References

- Kaggle Dataset of Human Heights, [Height of Male and Female by Country 2022 | Kaggle](#)