

Data Visualization Proposal: Global Migration Rate Over Time

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Motivation

The purpose of this visualization is to effectively communicate the scale of the global migration crisis to a non-expert audience. The visualizations provide an overview of migration trends while allowing users to explore details through interactive features. By making the data more accessible and engaging, these visualizations can raise awareness and enhance understanding of global migration patterns. Importantly, understanding these patterns can help organizations, policymakers, and humanitarian groups better allocate resources, plan interventions, and create strategies that facilitate access to international protection for those in need.

Dataset

The dataset for this project is sourced from the UNHCR Asylum Applications Data Portal. The selected options for the data export include:

- **Years:** 2014 - 2023
- **Months:** All months
- **Country of Asylum:** All countries
- **Country of Origin:** All countries
- **Data Items to Display:** year, asylum-seekers, refugees, others needing international protection

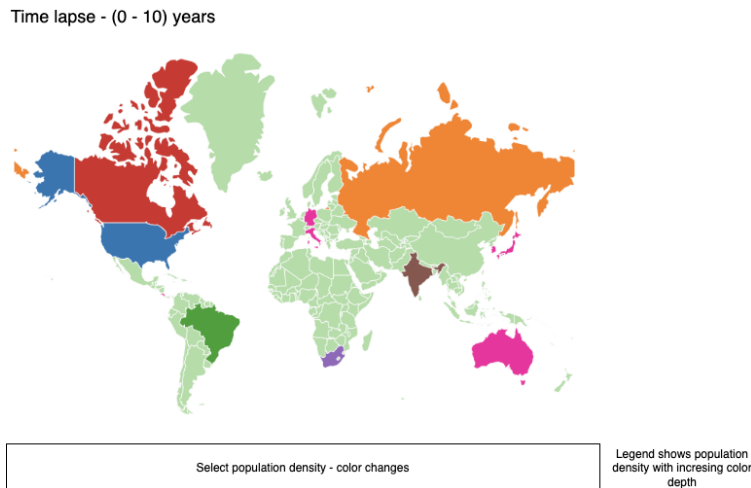
Proposed Visualization System

The primary visualizations for this project are a Choropleth map, a bar chart, and a Sankey diagram to comprehensively illustrate global migration data. Each visualization type is designed to provide unique insights that can ultimately aid in efforts to help vulnerable populations reach international protection.

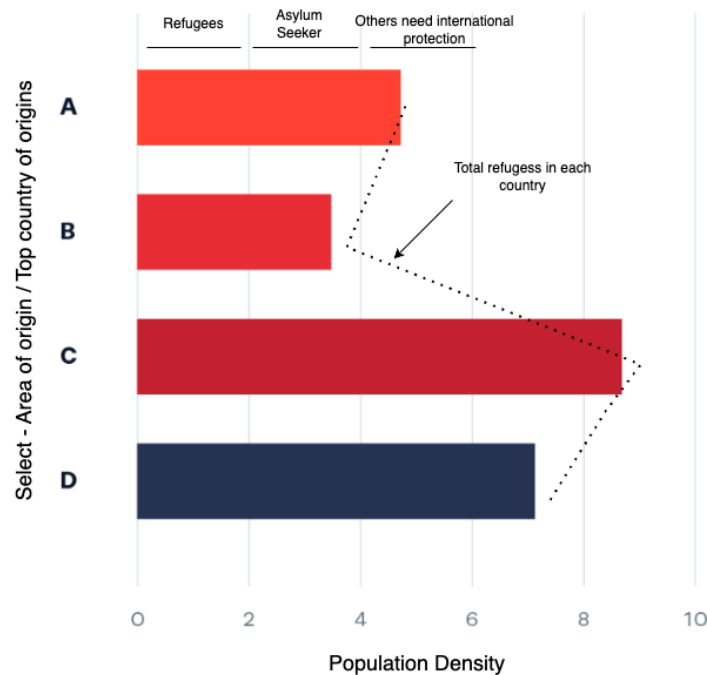


1. Choropleth Map

- **Map Layout:** The map covers all continents and displays countries with varying colors to represent different data levels.
- **Color Coding:** Color depth correlates with data magnitude. Darker or more saturated colors indicate higher values, while lighter colors represent lower values.
- **Time Lapse:** A feature labeled as "Time lapse - (0 - 10) years" suggests that the map can display data over a specific time period, such as population density or migration trends for a defined age group or span.
- **Legend:** A legend explains how color changes reflect population density or migration volume, with deeper colors indicating higher values.



2. Bar Chart



- **Horizontal Bar Chart:** Each bar represents a different region or country (labeled A, B, C, and D). The length of each bar corresponds to the value it represents, such as the total number of refugees or population density.

explore migration paths.

- **Clear Legends and Tooltips:** Ensure color distinctions between data categories are clear and provide a legend for easy interpretation.

Importance

Visualizing migration data using an interactive Choropleth map, bar chart, and Sankey diagram highlights significant global trends and makes complex data more comprehensible. These visualizations provide insights into where the highest concentrations of migrants are and reveal the routes they take. This information can help humanitarian organizations and policymakers plan effective interventions and allocate resources efficiently to support those in need, ultimately facilitating their journey to international protection and safety.

Conclusion

This project leverages the power of D3.js and interactive web technologies to create accessible, informative, and engaging visualizations for global migration trends. By combining Choropleth maps, bar charts, and Sankey diagrams, the project presents a comprehensive overview and detailed exploration of migration data from 2014 to 2023. These visual tools can assist stakeholders in understanding migration flows and focusing their efforts on ensuring that individuals can reach the international protection they require.