

World Happiness Report:

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Purpose:

1. To visualize the state of global happiness based on publicly-available data.
2. Review the state of happiness in individual countries and show how the new science of happiness explains personal and national variations in happiness.

Considerations/six factors:

- life expectancy
- Economics
- social support
- absence of corruption
- Freedom
- Generosity

Focuses in:

- Which country is the happiest/saddest
- Which factors have the greatest/smallest impact on nations happiness
- Is happiness increasing/decreasing
- Select two or more countries and focus in on what makes their nations
- the happiest/saddest based on:
 - Employment opportunities
 - Real estate value
 - Crime rates & statistics
 - Climate
 - Educational system
 - Culture (sports, music, theaters, games, arts)
 - Public Transportation
 - Food options (fresh markets, home gardens, cost of goods?)
 - Healthcare (retirement age and accommodations, life expectancy, etc)

Data Structures:

- Python Flask: to pull the data sources and store the data in a database (MongoDB) and return a json link for JS
- JS logic: to get the data and create visualizations (Radar Charts/Line Charts/Choropleth Map) based on the data
- HTML/CSS: to create a visual layout to interact and see the page contents

Data Visualizations:

Page Content

Section 1: Choropleth map

- Showing countries, shaded by happiness score, for a selected year
- Can toggle between years
- World map should by default show world happiness indices for most recent year (2019) - Drop-down menu (switch?) can be used to toggle between the 5 years of data we have a separate switch can be used to toggle between the 6 constituent factors that the happiness index comprises to visualize how important different factors may be in a country's overall happiness. That gives us $5 \times 7 = 35$ total different 'topologies' on the world map depending on what year and factor is selected



Section 2: Radar chart

- Select a country
- Radar spots are the individual metrics

Section 3: Line chart

- Line graph for individual countries
 - X-axis : years
 - Y-axis : score
- Options:
 - Select multiple countries
 - Ability to search for individual countries
 - Toggle by individual metrics

Possible resources:

Kaggle

<https://www.kaggle.com/unsdsn/world-happiness>

Google Data Search

<https://datasetsearch.research.google.com/>

World Health Organization

<https://www.who.int/>

The World Bank

<https://data.worldbank.org/>

The World Happiness Report

<https://worldhappiness.report/ed/2020/>

JavaScript Library:

DataMaps

<http://datamaps.github.io/>