

WORLD POPULATION PROJECTION 2050

An effort to learn narrative visualization.

Assignment 7-3-3

DV498

By

Sandeep Yadav

(Net Id: sandeep9)

Summer 2019

Messaging: The article is started with details about population growth. Screenshot is provided to display a cartogram. Many observations are provided here with questions and other aspects about population growth till 2050.

Another aspect is provided by letting user know how much time it took for each billion people to add to world population.

World population projection by regions are provided in bar chart which each bar chart drilling into another chart where major cities population projection is provided for that region.

World Population interactive line chart is provided for projection till 2050 where user has ability to interact and find population projection within years.

Narrative Structure:

Martini Glass Visualization - This analysis is based on martini glass visualization taking into consideration to provide author selected questions, suggestion data to reader and then allow reader to drill down further in any direction based on its choice keeping structure in mind which will present an overview and allows the user to explore further from there. There is a jumping point after which reader driven content is provided in form of interactive charts where reader can select, highlight and filter different values and understand the data more effectively.

Visual Structure:

Interactive Bar Chart and Line chart are used keeping author and readers' perspective in mind. First Cartogram is displayed to show current population of country based on size then bar charts are provided for each region. This is simple scene by scene vertical scrolling it provided for easy navigation. There Reader can understand data based on first author driven content and get an idea of what further can be investigated. Same kind of bar chart template is used to keep reader away from disorientation and help navigate from one scene to another scene.

Scenes:

Four scenes are used in this Martini Glass narrative visualization story in a sequential order as described below.

- a. Author Driven Stem funnel:
 - 1) First Current Population size is shown by Cartogram screenshot image. Only provide an idea and interaction.
 - 2) Second how each billion is added into population and how much time it took for same. Again it's an observation telling from author.
- b. Reader Driven Glass Opening:
 - 3) Third Bar chart is provided by Region projection of population till 2050 and interactivity is provided using parameters and triggers. Each bar is parameterized to pass region value to new chart where that region's top 5 cities population is projected on the screen.
 - 4) A Population line chart is provided at the last to allow user to further select the area to see how population will grow in that certain time frame.

Annotations:

- 1) Annotation is provided in Bar chart – when reader hover its mouse on the bar, it display a dotted horizontal line which tells user at the same time how much that region is more or less populous compared to other regions.
- 2) Functionality to mouse hover on Bar chart – change pointer to hand to tell user to click on the bar to drill further into chart.
- 3) Functionality to mouse hover on line chart – change pointer to cross to select area to drill further into chart and double click to get out of it.

Parameters:

When reader hover mouse on bar charts it changes it from pointer to hand and communicate reader to click on it which navigate them to new scene for each specific region's cities. Parameters are used here to define new state of each scene based on the region selected and provide more details on top cities from that continent or region area.

Triggers:

Trigger is used in Line chart where - Each time the brush selection changes, it trigger the update chart function to update and show the new data in the new boundaries. This changes the state of the narrative structure.