

573 Final Project Proposal

[Worldwide Human Migration]

Basic Info

- **Project Title:**
 - Worldwide Human Migration
- **Team Members:**
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- **Project Repo:**
 - <https://github.com/coyawa/DataVisFinal>

Background and Motivation

1. Background

Inspired by Xiaoqun's week 2 reflection about a video named 'Humanity's cultural history captured in 5-minute film'. Which demonstrate 120,000 individuals who were notable enough in their life-times that the dates and locations of their births and deaths were recorded.

The other website: <http://peoplemov.in/> shows the global immigration flow at 2010. We want to further visualize the trend of immigration based on different attributes like year, GDP, war zone. Our goal is to explore the reason behind the immigration flow. Connection between viz and reader, considered.

2. Motivation

We are all international students who decided to move to another country to study. Therefore, we are curious about what stimulates people to live in another country. The war? The population density? Or any other reasons.

Project Objective

1. Questions to be Solved

In our meeting, we found two categories of question to be solved by visualization. The first one is to figure out the global/general migration pattern, the second one is to explore the migration pattern for one specific country. Not only the migration volume and migration direction but also the situation for those countries will be presented in our attempts.

2. Things to Learn and to Accomplish

In this project, we could learn how to design a webpage and how to organize and present the dataset in a way that consumers are willing to take a look. What's more, we will learn how to combine different charts with various visualization idioms to achieve our goal. What we will accomplish is a web page contains well organized visualizations and descriptions to tell a story .

3. Benefits.

In this project we believe our skills on D3 would be sharper.

Data

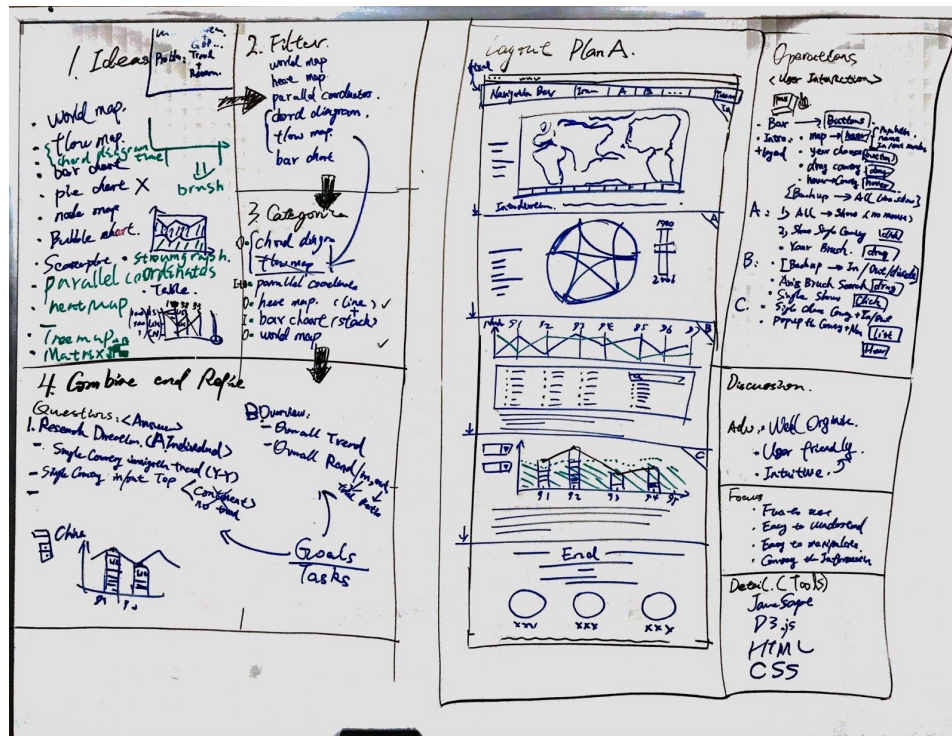
For the dataset, the first problem is where to collect the migration data. For the migration data, we found two data sources that have different durations and different country(which might take a lot of time to clean the data). In the further discussion, We decided to add more features in our visualization, that's the reason why we introduced world population data by country in our dataset.

- 1.Migration flow till 2009.
- <http://www.un.org/en/development/desa/population/migration/data/empirical2/migrationflows.shtml> (Contains Migration data from 2000 to 2009, divided by Country(region, developed or developing country) or by citizenship)
- 2. Migration bilateral matrix data at 2010,2013.
- <https://www.worldbank.org/en/topic/migrationremittancesdiasporaissues/brief/migration-remittances-data>
- 3. World population data(by country)
- <http://data.worldbank.org/indicator/SP.POP.TOTL>

Data Processing

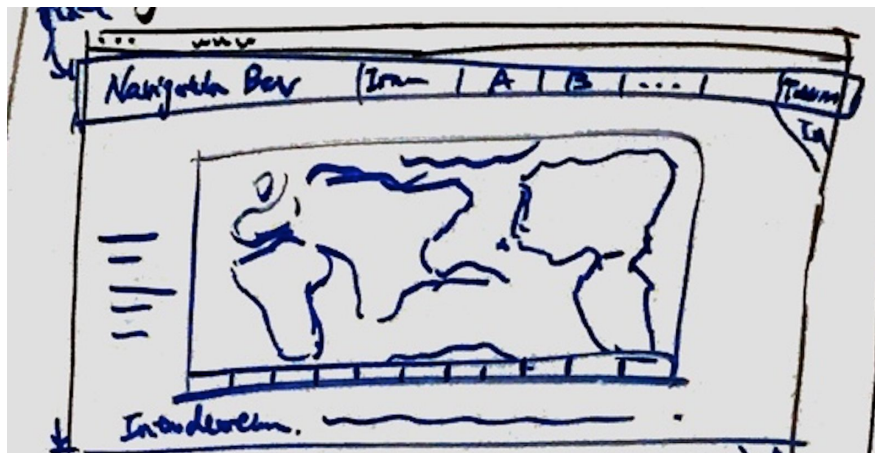
The data for each country are stored in different files, and since we have three data sources including migration data, population data. Substantial data processing are needed in our project, because we need to integrate all the data source in one file.

Visualization Design



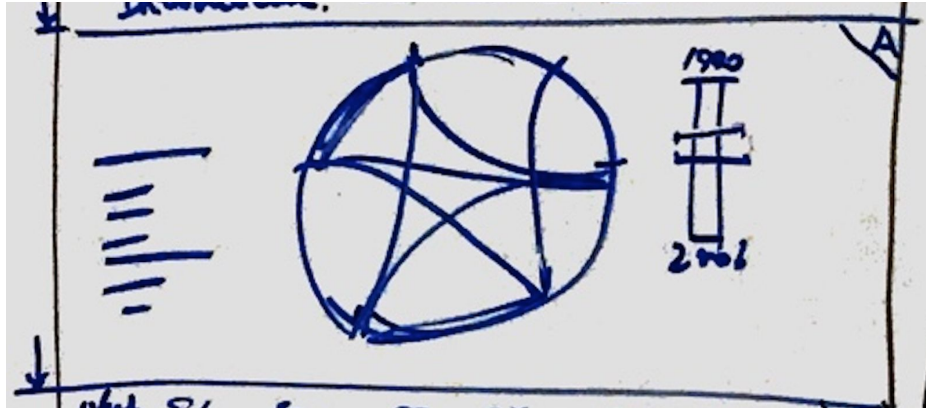
- This is the visualization design brainstorm whiteboard sketch, we use the five design sheet inspired from (<http://fds.design/>). Finally we decided to choose four visualization to build this visualization.

V1: The World Map Visualization



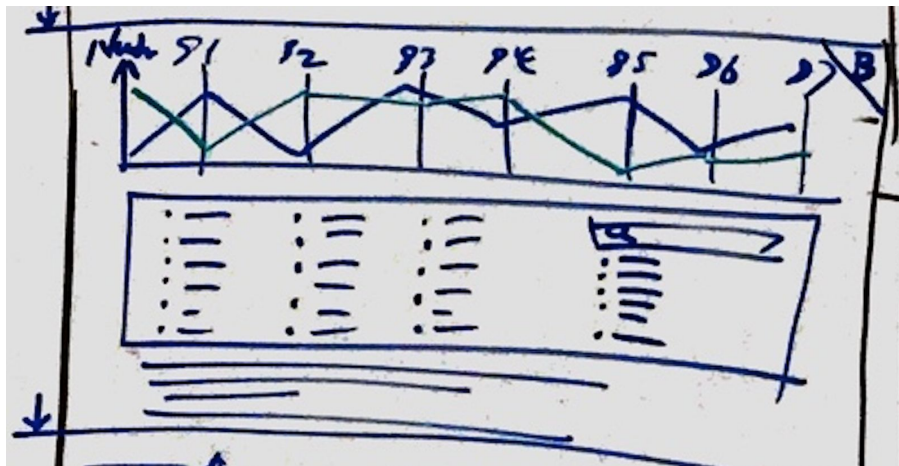
- We choose this because World map with links to show migration. The deeper color shows denser population

V2: The World Map Visualization



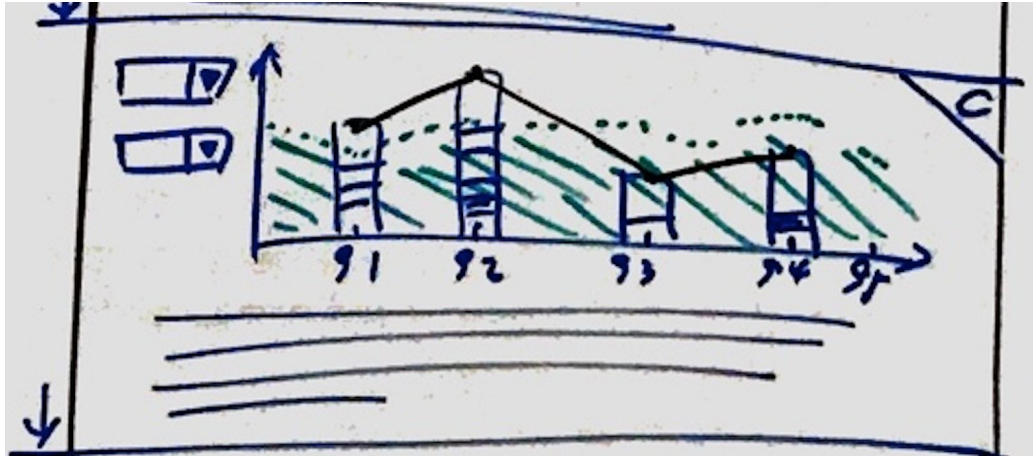
- We choose this because

V3: The World Map Visualization



- We choose this because

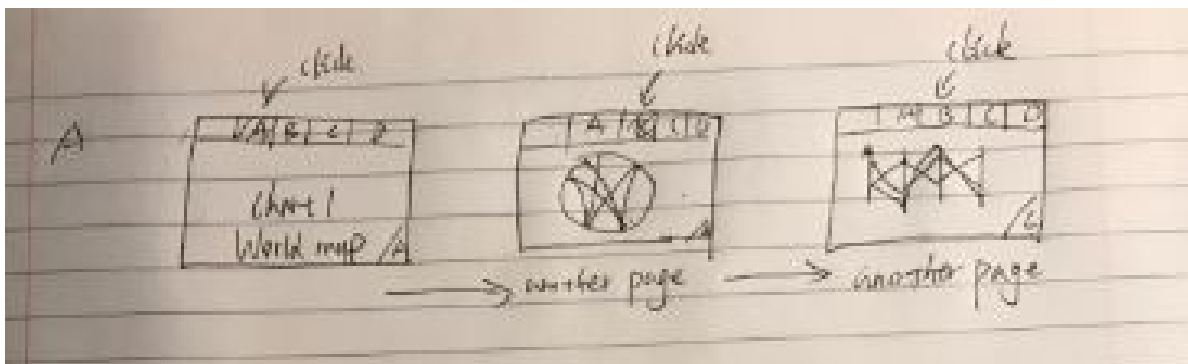
V4: The World Map Visualization



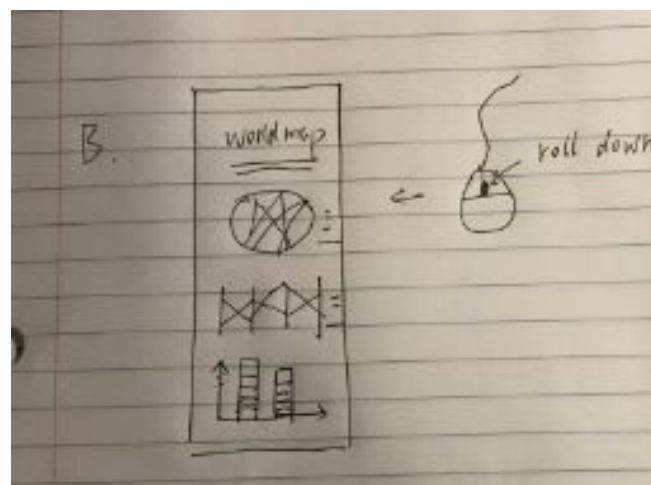
- We choose this because

Website Layout Prototypes.

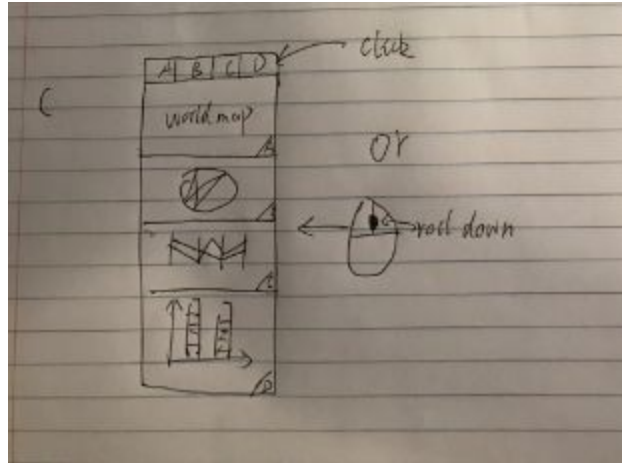
Design A:



Design B



Design C



In our meeting, after watching many visualization pages, we proposed three prototypes for our website layout. After careful consideration, we chose the Design C which contains the characteristics both in Design A and Design B.

For design C, further descriptions are listed as follows.

- We choose the One page view instead of the more navigate button to other pages.
- Demo web page example : <http://hotcars-nyc.github.io/>
- If we have limited time, we can do like the example use the service of <https://startbootstrap.com/>

Must-Have Features

1. World map with links to show migration and combined with heat map to show the population density
2. The navigation bar on the top
- 3.

Optional Features

1. Animation to the world map links
- 2.
- 3.

Project Schedule

- Week5: 2/15 Submit the project proposal
- Week6: 2/23 Finish the data clean and prototype presentation
- Week7: 3/02 Final submission with video