



MONASH University

Five Design Sheets

# Refugee Unemployment Influx

FIT5147 Data Exploration and Visualization

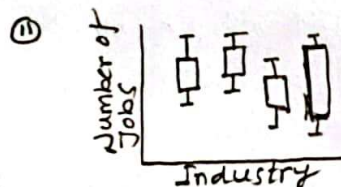
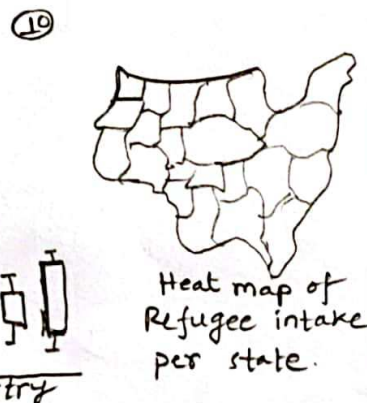
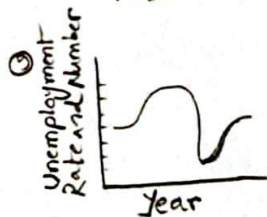
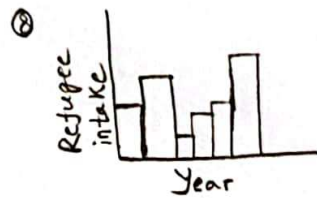
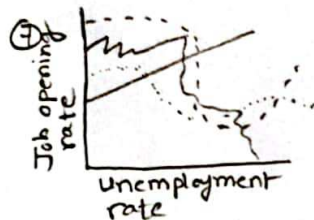
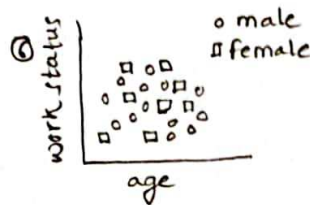
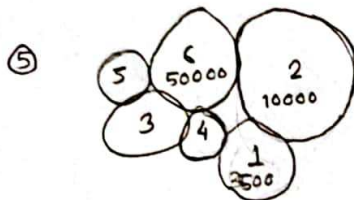
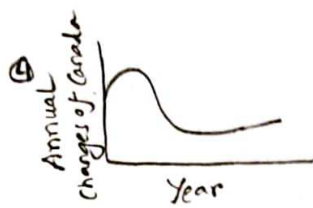
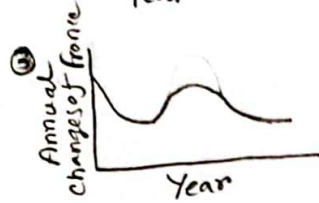
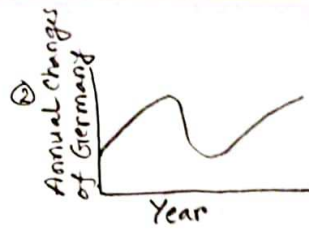
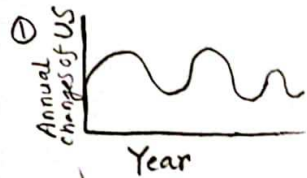
Semester 1 2023

Name: Nazmus Sakib

Student ID: 33361991

Tutor: Niranjan Nanjunda

## 1. Ideas



2. Filter: Graph 1 to 4 can be combined together representing each country with a different color.

• Graph 5 will show the number of refugee intake, permanent residency status when hovered over.

• Graph 7 will show job opening rate and unemployment rate with different types and colors to represent different year.

## 3. Categorize

• Graph 1 to 4 is one category of annual change.

• Graph 7 and 9 is in one category of unemployment rate.

• Graph 5, 8 and 10 in one category of refugee intake.

• Graph 6 is in one category of work status.

## 4. Combine and Refine

• Graph 1 to 4 can be combined together representing each country with different with different color.

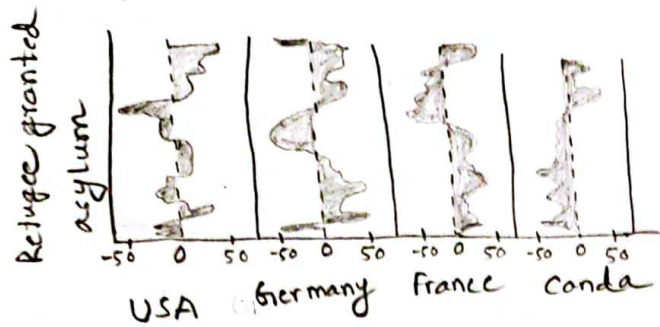
• Graph 5 and 10 can be combined together to visualize refugee intake.

## 5. Question

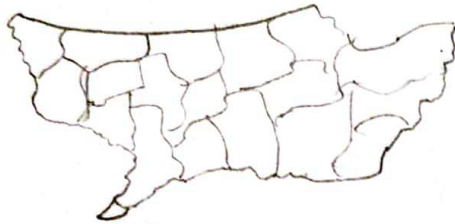
1. How the rate of Job opening in USA and unemployment rate vary by year.

2. Can the refugee employment rate be figured out by combining the job opening rate and no. unemployment rate and no. refugee intake year and industry.

## Layout ①



②

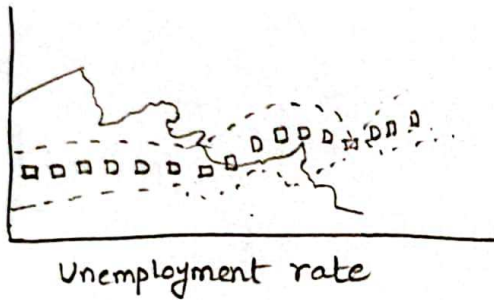


Selected Year

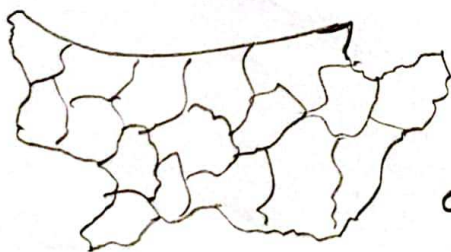
2021 ↓

③

Job opening rate



## Focus

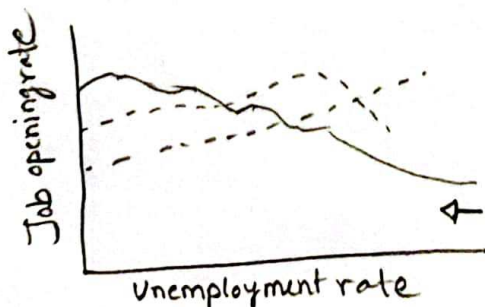


Selected Year

2021

0 600K

The heat map will show colors according to the intake per state according to the year. The range will be from 0 to 600K.



month  
year  
Job opening  
rate  
unemployment  
rate

Title: Refugee Unemployment

Author: Nazmus Sakib

Date: 16-05-2023

Sheet: 02

Task:

## Operations

- From the first graph, when a point is hovered on the exact amounts will be displayed.
- For the second graph, the user will be able to select the year.
- For the second graph, when the user hovers over any state then the refugee intake for the selected year.
- For the third graph, when the user hovers over any point then the month, year, job opening rate and unemployment rate will be displayed in a tooltip.

## Detail (Discussion)

+ We have enough data for USA to present data.

+ The refugee intake can be displayed for every year from 2021 to 2021 can be displayed.

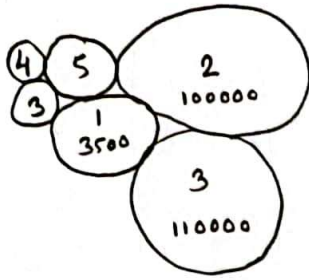
- Can not compare refugee influx for the other countries.

- Do not have enough information for the other countries.

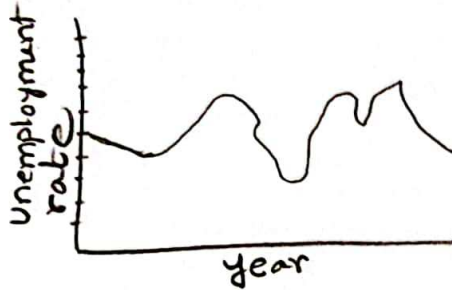


## Layout

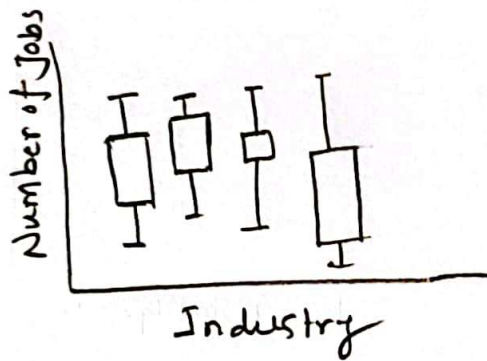
①



②



③



Title: Refugee Unemployment

Author: Nazmus Sakib

Date: 16-05-2023

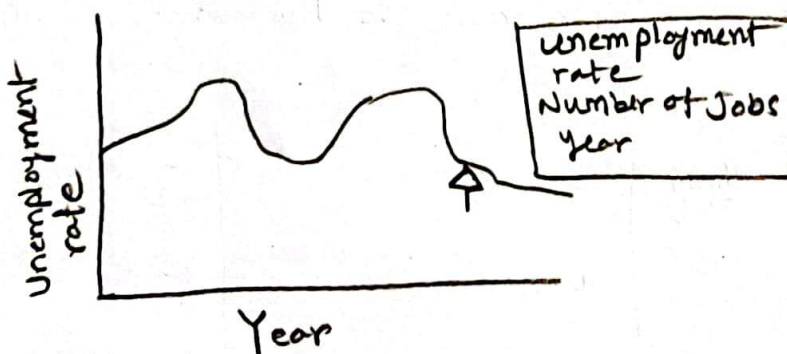
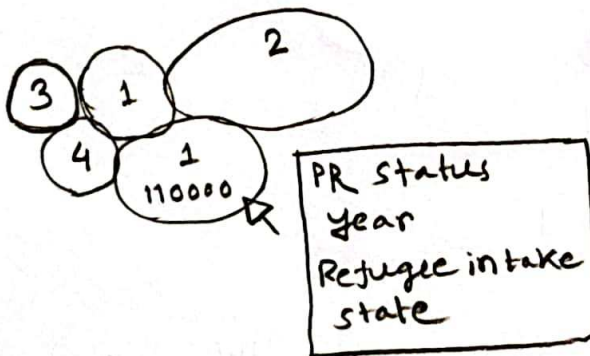
Sheet: 03

Task:

## Operations

- When user hover over any circle in the proportional symbol graph a tooltip will display where the PR status, year, refugee intake and state will display.
- The proportional will also have legends to demonstrate the colors and size.
- The unemployment rate vs year graph will show a tooltip containing info about unemployment rate, number of jobs and the year when the mouse is hovered any point in the line.

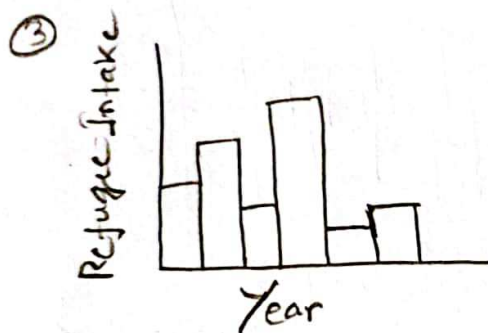
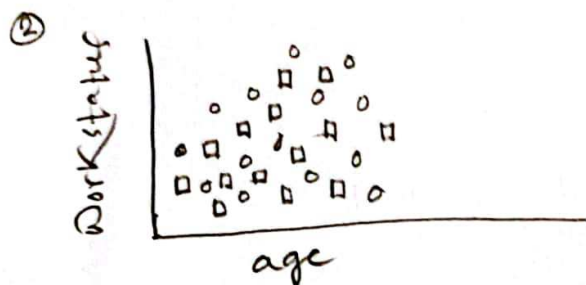
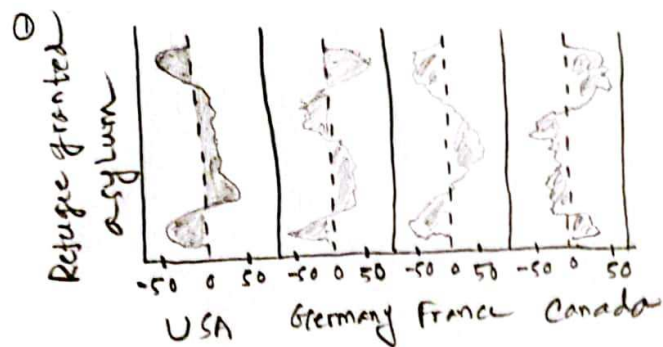
## Focus



## Discussion

- + The PR status for state can be shown.
- + The refugee intake for each state can be displayed.
- + The unemployed rate according to the year can be displayed.
- The unemployed rate has both refugee and citizens included.
- The box plot also has refugee and citizens included in the graph.

## Layout



Title: Refugee Unemployment

Author: Nazmus Sakib

Date: 16-05-2023

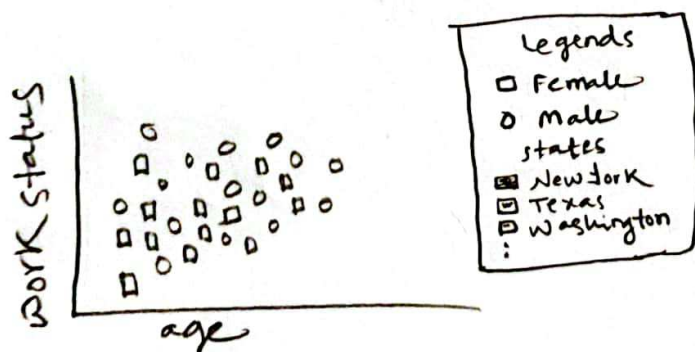
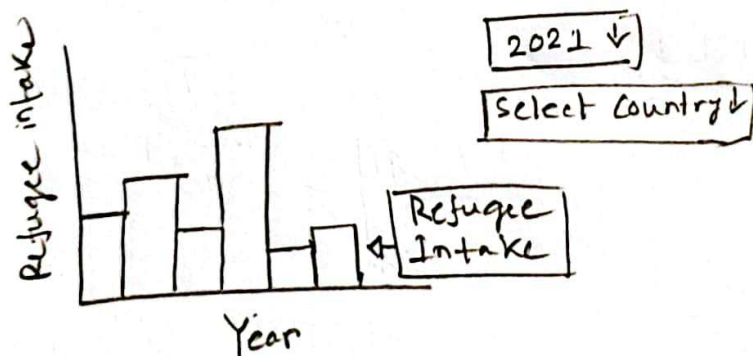
Sheet: 04

Task:

## Operations

- For the refugee intake graph user will be able to select the year and country 0 to view graphs.
- When the user hovers over the bars it will display the refugee intake for the graph.
- The work status graph will display legends for male and female and colors for each state in USA.

## Focus

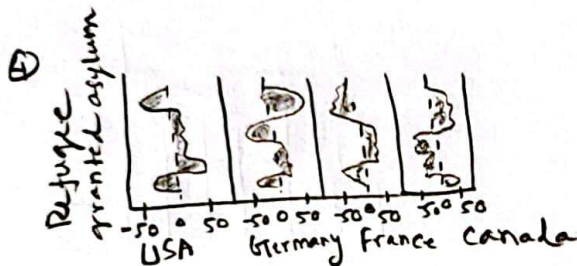
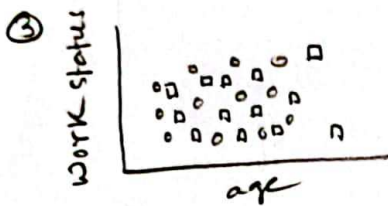
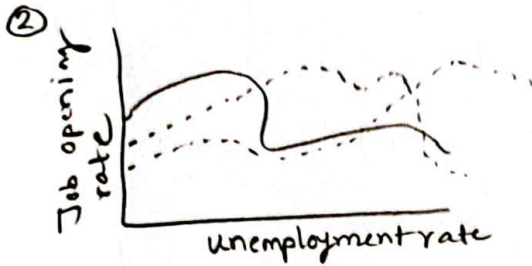
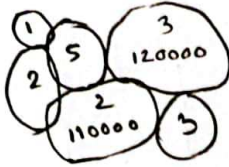


## Discussion

- + Refugee intake for the years can be compared
- + Annual change of France USA, Germany and Canada can be compared
- The work status graph will be too clustered with symbols.
- Just the annual change can be visualized for other countries.



## Layout ①



Title: Refugee Unemployment

Author: Nozmus Sakib

Date: 16-05-2023

Sheet: 05

Task:

## Operations

- The work status vs age graph will display legends for gender and states.

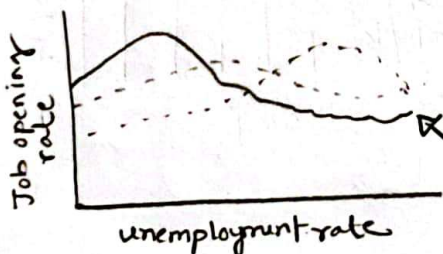
- For the job opening vs unemployment rate the user can select the year and hovered over it will show tooltip.

- For proportional symbol the user can hover over any circle and it will show the PR status, year, refugee intake and state. It will also show the legends of size and PR status.

## Focus

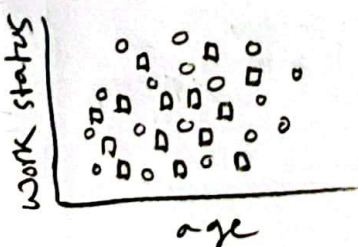


PR status  
Year  
Refugee Intake  
state



2023 ↓

Month  
Job opening  
Unemployment



Legends  
□ Female  
○ male  
state  
■ New York  
■ Texas  
...

## Discussion

Detail: The visualizations included that total 8 datasets. The dataset include ASR, civilian labour, refugee influx, multi country and employed and unemployed datasets.

## Dependencies:

Latest version of R(shiny)

## Time to build:

3 weeks 2 hours each day.