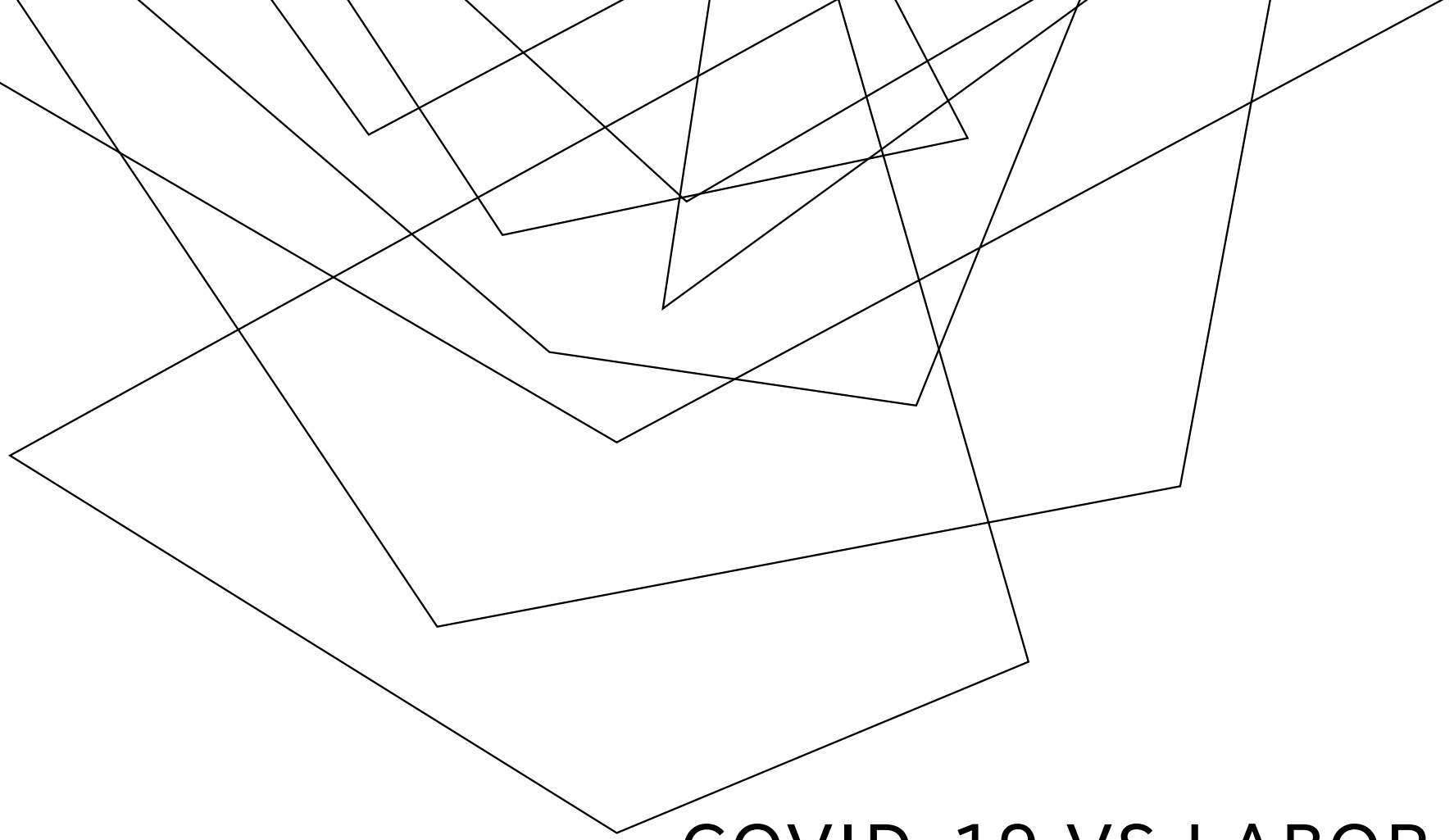


COVID-19 VS LABOR MARKET

Prattasha Nawar Islam

WHAT?

How has the COVID-19 recession affected the US labor market dynamics of men and women?

WHY?

- COVID-19 Pandemic
- The effects of COVID-19 recession can still be currently felt in a lot of aspects in the labor market (working remotely, layoff of workers etc).
- It affected men and women workers differently
- According to a FRED blog, recessionary periods have always had a larger effect on men's employment than women.
- Hence, it was always a "he-cession" and then followed by a recovery period of "he-covery". But FRED claims that looking at the statistics after COVID-19 recession, it is seen to be trending towards a "she-cession" instead.
- Use for research purposes

HOW?

Creating a database application of relevant data using Postgres SQL and R Shiny app

DATA

Multiple data series related to the labor market can be used in this database. The data series are: (1948-2023)

- Unemployment Rate – Men
- Unemployment Rate – Women
- Labor Force Participation Rate – Men
- Labor Force Participation Rate – Women
- Employment-Population Ratio – Men
- Employment-Population Ratio – Women

Two data series shortlisted from the Our World in Data platform are: (2020-2022)

- COVID-19: School and Workplace Closures
- COVID – 19: Income Support and Debt Relief

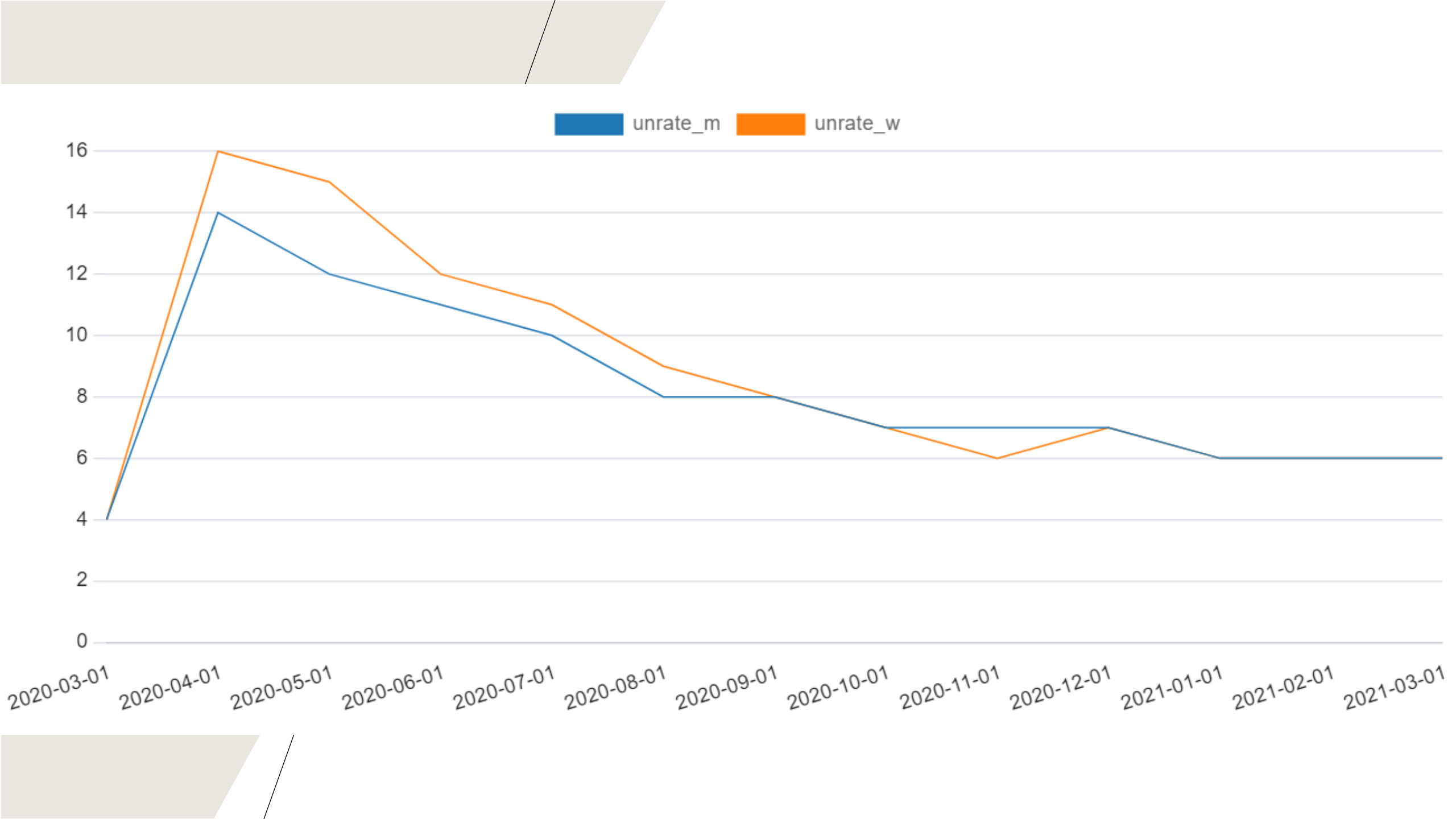
DATA (SHORTENED)

To simplify the process of designing this database the data proposed above was shortened for use.

Data used in database application design:

- Unemployment Rate –Men
- Unemployment Rate – Women
- COVID-19 School and Workplace Closures
- March 01, 2020 – March 01, 2021, at monthly intervals

Snapshot of US Unemployment Rates: Men and Women
unrate_w
4
8
12
16
unrate_m
2
4
6
8
12
1960
1980
2000
2020
Time


unrate_m
unrate_w
16
14
12
10
8
6
4
2
0
2020-03-01
2020-04-01
2020-05-01
2020-06-01
2020-07-01
2020-08-01
2020-09-01
2020-10-01
2020-11-01
2020-12-01
2021-01-01
2021-02-01
2021-03-01

DATABASE DESIGN

COVID-19 vs Labor Market

School Closure value:(0 - No measures, 1 - Recommended closing, 2 - Required closing, 3 - Required closing at all levels)

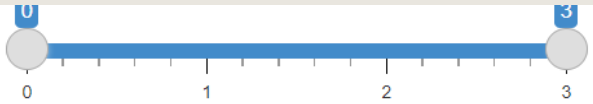
Workplace Closure value:(0 - No measures, 1 - Recommended closing (or work from home), 2 - Required closing (or work from home) for some, 3 - Required closing (or work from home) for all

Choose a date:

All

observation_date	unrate_w	unrate_m	school_closures	workplace_closures
3/1/2020	4.40	4.40	0	0
4/1/2020	16.20	13.50	3	3
5/1/2020	14.50	12.10	3	3

DATABASE DESIGN



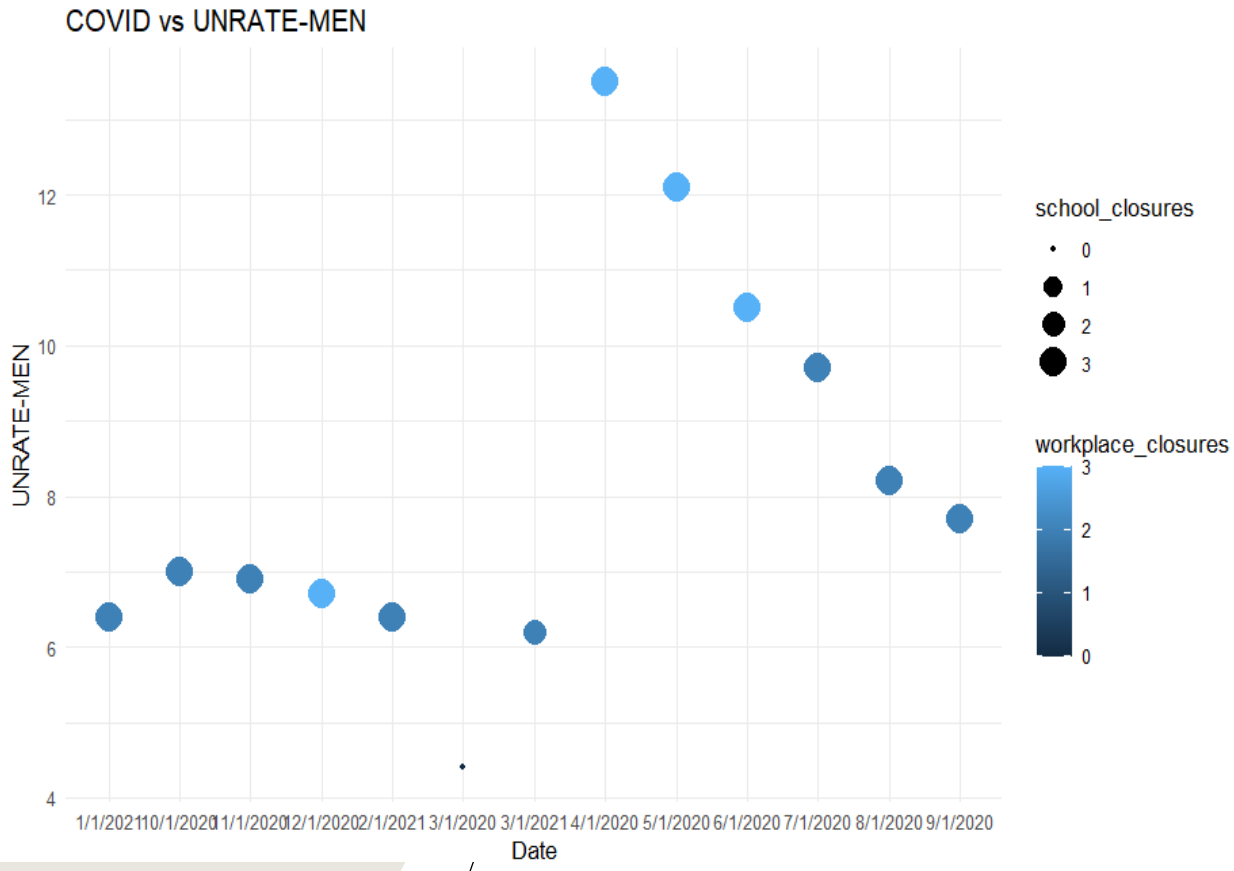
Choose a date:

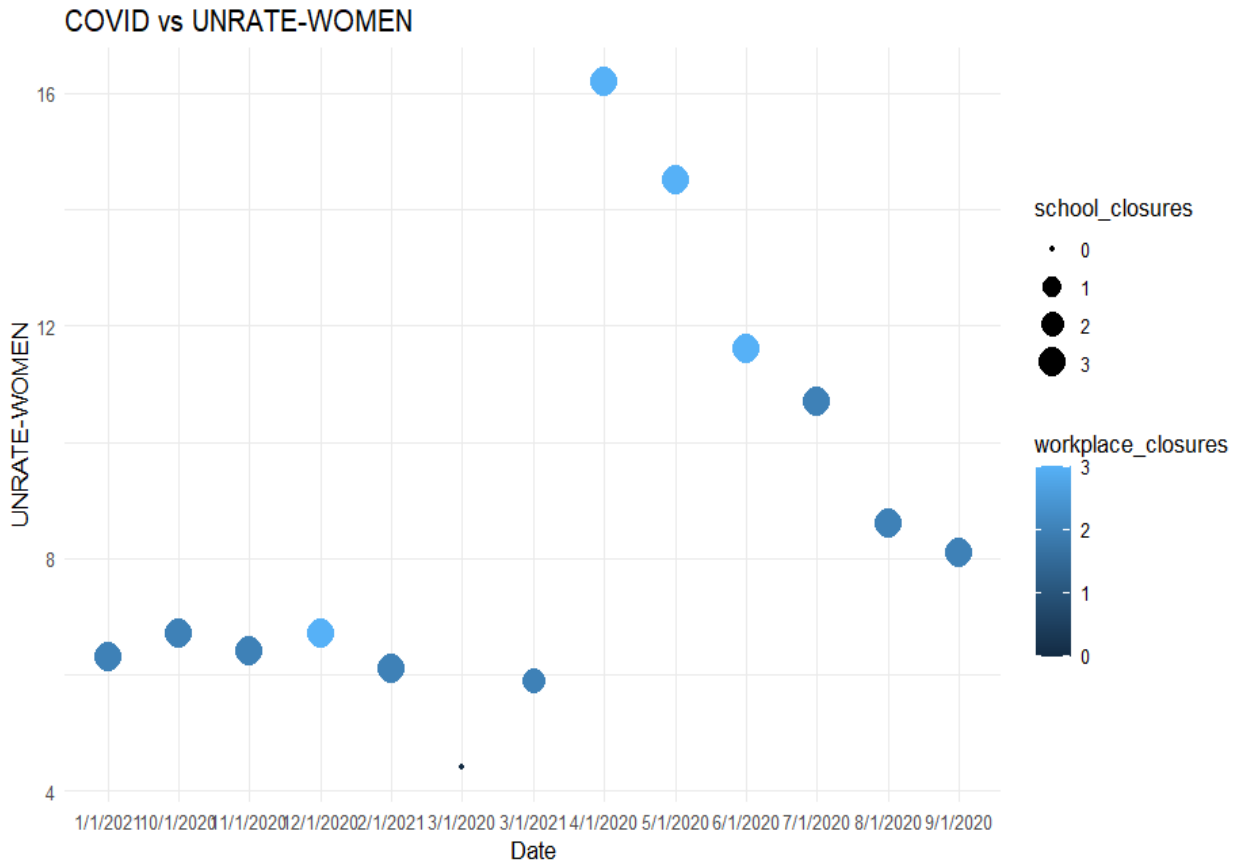
All

observation_date	unrate_w	unrate_m	school_closures	workplace_closures
3/1/2020	4.40	4.40	0	0
4/1/2020	16.20	13.50	3	3
5/1/2020	14.50	12.10	3	3
6/1/2020	11.60	10.50	3	3
7/1/2020	10.70	9.70	3	2
8/1/2020	8.60	8.20	3	2
9/1/2020	8.10	7.70	3	2
10/1/2020	6.70	7.00	3	2
11/1/2020	6.40	6.90	3	2
12/1/2020	6.70	6.70	3	3
1/1/2021	6.30	6.40	3	2
2/1/2021	6.10	6.40	3	2
3/1/2021	5.90	6.20	2	2

DATABASE DESIGN

1/1/2021	6.30	6.40	3	2
2/1/2021	6.10	6.40	3	2
3/1/2021	5.90	6.20	2	2





LIMITATIONS

- Deployment of the app shows error on the webpage

https://prattashaislam.shinyapps.io/FinalProject/

- Used a subset of the data for simplification

WHAT'S NEXT?

- If time permits,
- Debug any issues with the application
- Make the database more interactive and more customized
- In future,
- Use more data series from different sources
- Use more data to see better results

THANK YOU