CS 5630 Group Project Proposal

Coronavirus Disease 19 viewed as Chronology

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Daniel Pak (u0927688)

pic2725@gmail.com

Yoon Kim (u1214115)

ruddbs5302@gmail.com

Github Repository

https://github.com/pemassi/dataviscourse-pr-covid-19

Background and Info

This year (2020) has been greatly impacted by Coronavirus Diseases 19 (COVID-19) and even our life pattern is changed. This issue is a current hot potato for all generations and we could handle this much better if we prepare or acknowledge the disease before it spreads. Therefore, we thought it would be a great opportunity to understand the virus and check and follow its chronology by time.

Project Objectives

We would like to backtrack the virus each time that countries have most spread the virus and have been controlling well. Therefore we can learn :

- Which countries are handling better on the virus
- Able to learn their system to control the virus effectively
- Able to scope the virus by time and a user can compare it with other social events

Data

Our data is from the 'Our World in Data' organization. They provide 'Coronavirus Source Data' which is open source and free for all-purpose.

Reference: https://ourworldindata.org/coronavirus-source-data

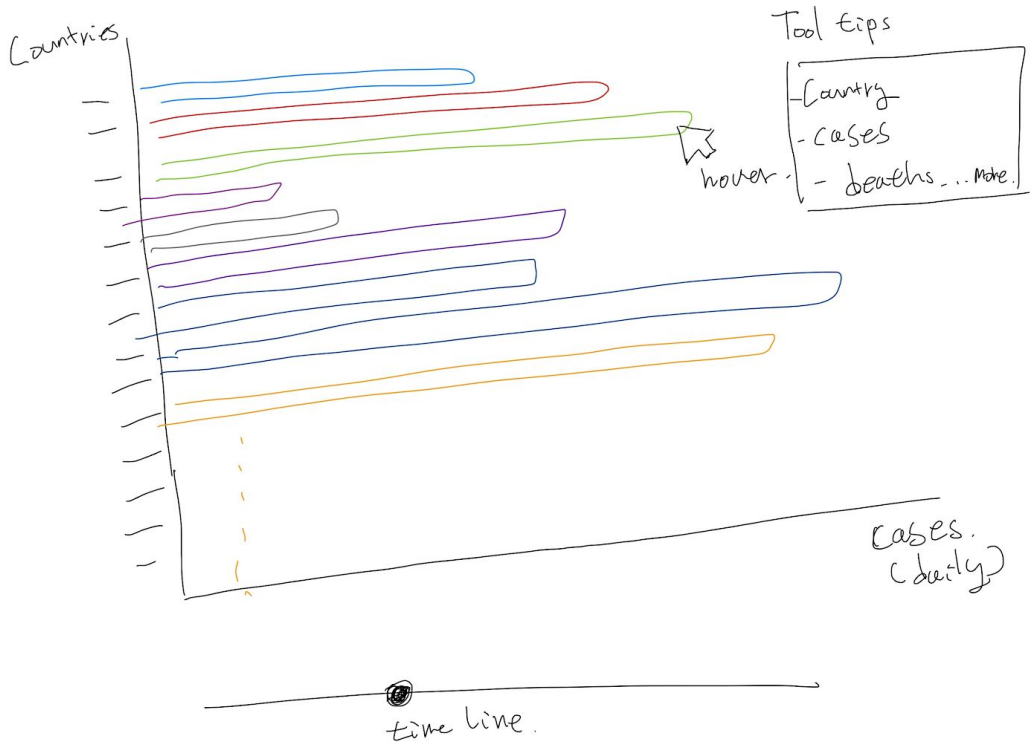
Data Processing

All the necessary data is already there and we do not need to modify it. The data is updating as live on their site (https://covid.ourworldindata.org/data/owid-covid-data.csv)

Visualization Design

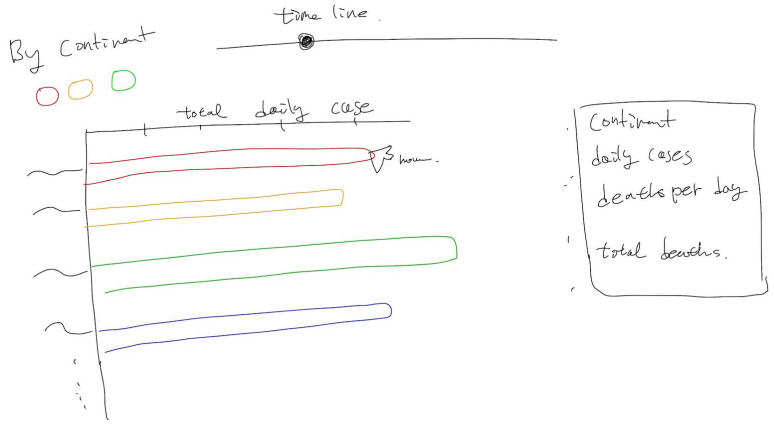
We are looking to work the design 3.

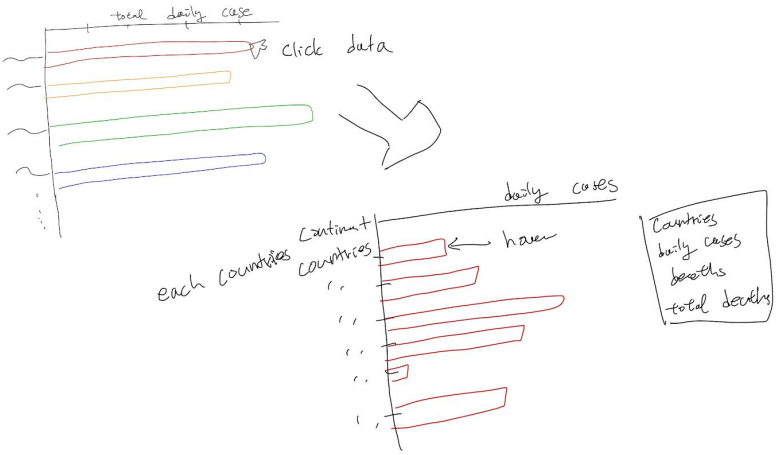
- Design 1



It is just a plain rectangle graph that shows daily cases by timeline. By hovering the mouse, it shows tooltips for the data. Also, when a user clicks the play button, the timeline automatically changes.

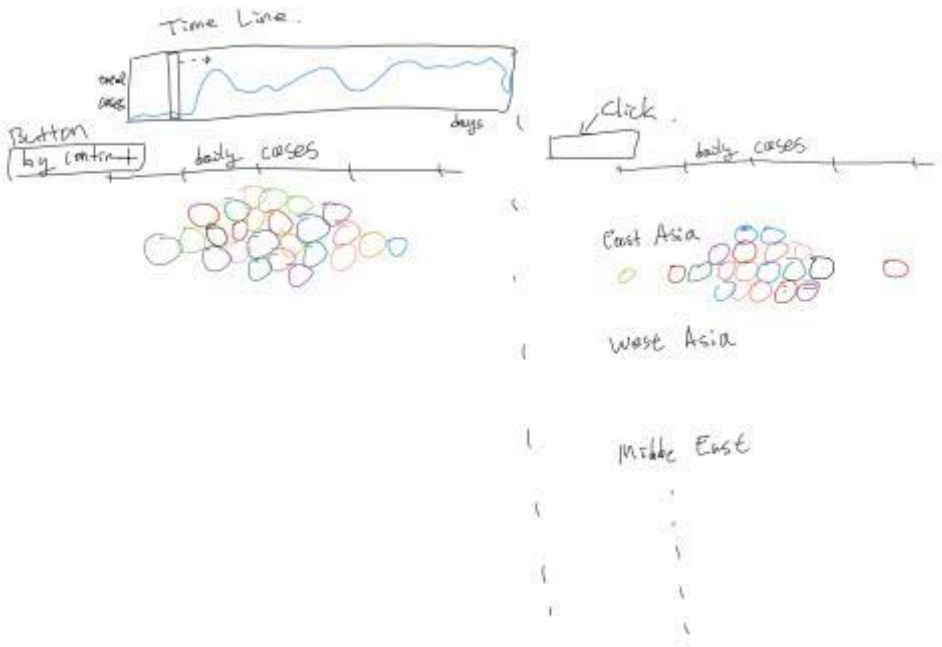
- Design 2

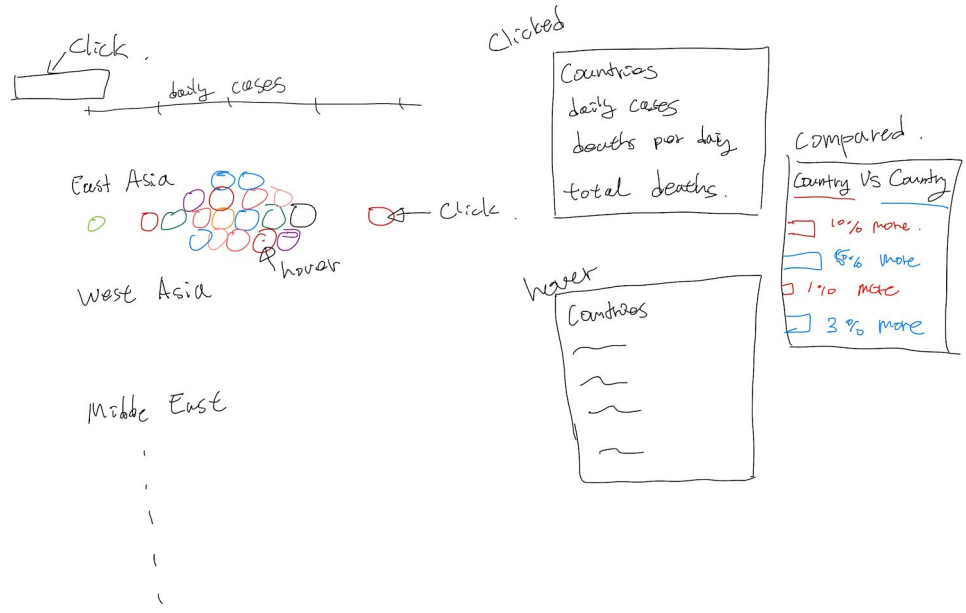

By Continent
time line
total daily case
hover
Continent
daily cases
deaths per day
total deaths

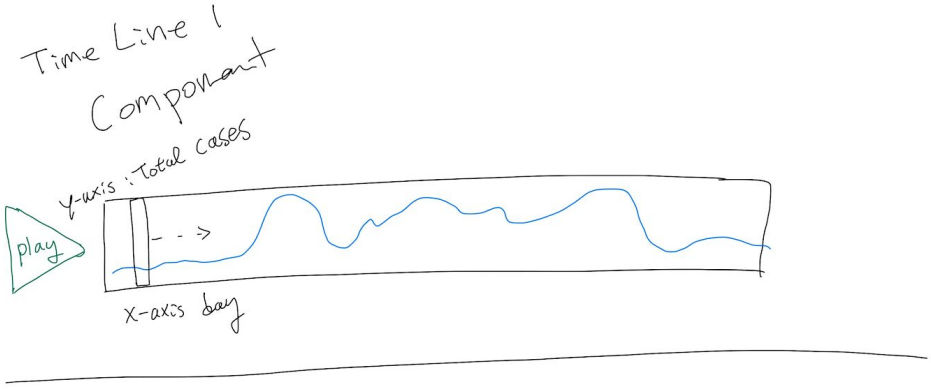

total daily case
Click data
daily cases
Continent
each countries
countries
hover
Countries
daily cases
deaths
total deaths

The first graph shows the daily cases by continents and timeline. When hovering the graph, the tooltip shows details of the data. When a user clicks specific data, it scopes the data by countries and expands the graph. The graph is also able to hover the data.

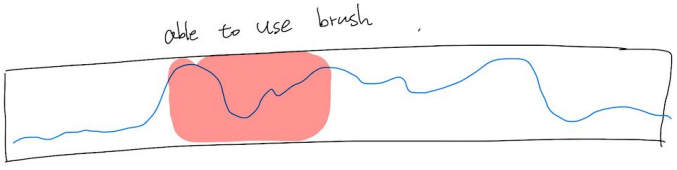
- Design 3




Click.
daily cases
Clicked
Countries
daily cases
deaths per day
total deaths.
Compared.
Country Vs Country
10% more.
5% more
1% more
3% more
East Asia
Click.
hover
West Asia
lower
Countries
Middle East


Time Line 1
Component
y-axis : Total cases
play
x-axis day

Timeline 2


able to use brush

At first, shows the data cluster by daily cases and timeline. The X-axis of the timeline represents days of Covid-19 and the Y-axis for total cases per day. A user is able to click a play button that automatically moves the timeline indicator by days, and by clicking the graph the data will be displayed according to the selected date. A user can drag the timeline that allows selecting a certain time period that the user wants to scope more, and the data will be displayed according to the selected time period. When a user clicks the expansion button, the data displays by continents and it's also able to hover and get details. When a user clicks the data(country), the data pins at the top, and by hovering the day it shows its details and compares each component with clicked(pined) data.

Must-Have Features

- Display the cluster data by daily cases and timeline
- Hovering features
- Each timeline, change the displayed data.

Optional Features

- Able to click the data and pinning its details at the top
- Hovering the data and getting its details and the bottom
- Compare two details and show results by each category
- Play button that automatically changes timeline by a day

Project Schedule

- Week 1
    - Display the data by daily cases
    - Add timeline
- Week 2
    - Expands the data by continents
- Week 3
    - Retrieve the data details by clicking and hovering
    - Compare details of the two data