IT @ Singapore Alpha Release

Information Technology in Singapore through and after Covid Pandemic

Overview:

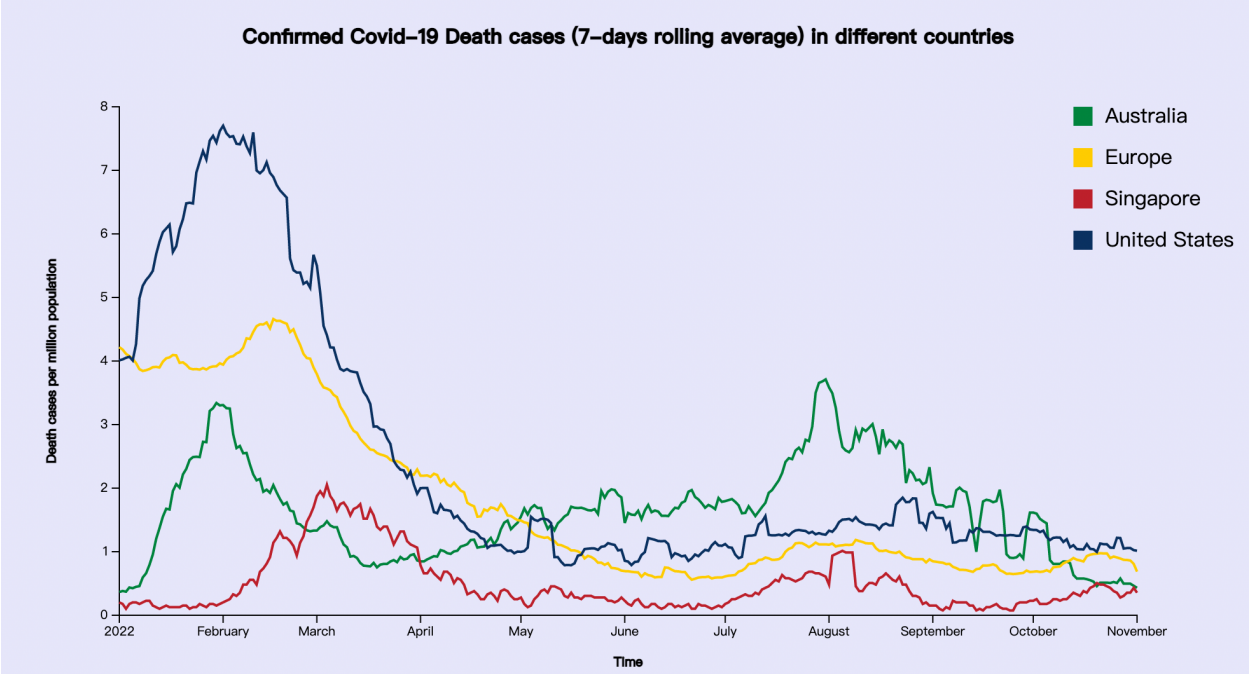
There were a lot of revisions on the data/visualization selection since I noticed previous choices were either hard to finish or didn't bring good effect. Any suggestions on these changes are welcomed.

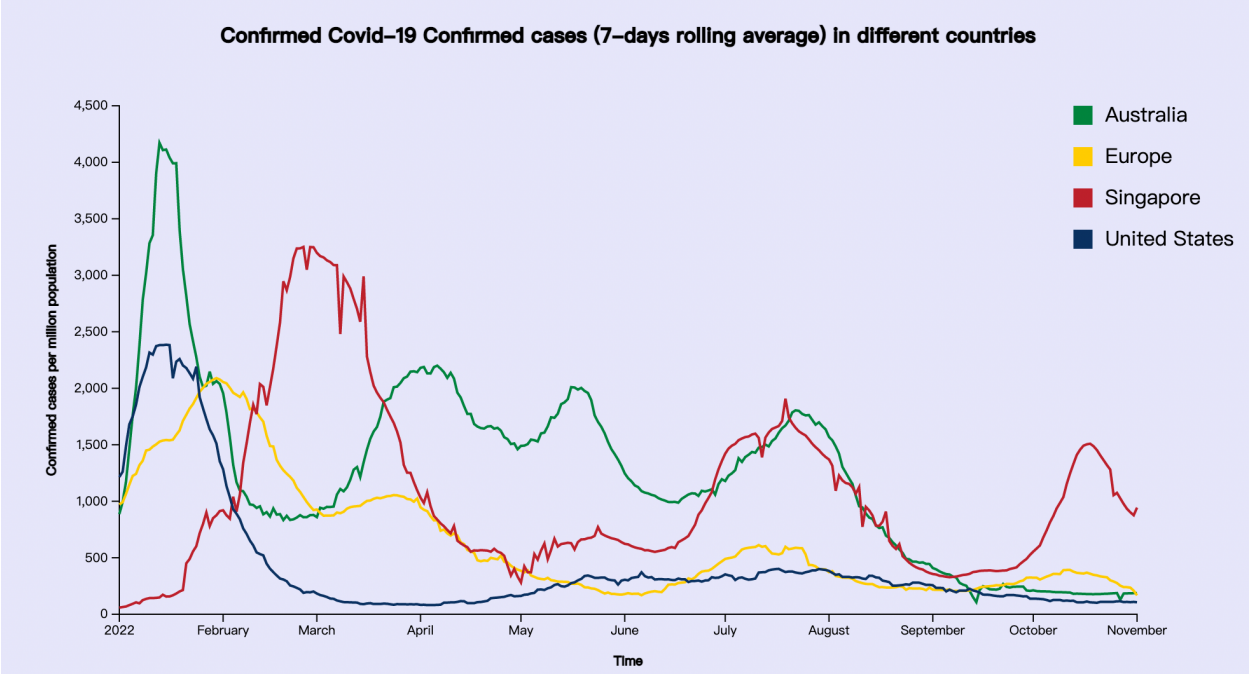
Changes:

1.A [OLD]A Grouped Bar Chart of Covid Case-Population & Death-Population Ratio between Mainland China, Singapore and US
->
[NEW] A **Line Graph** of Covid Case-Population & Death-Population Ratio between **Singapore, US, Europe and Australia**

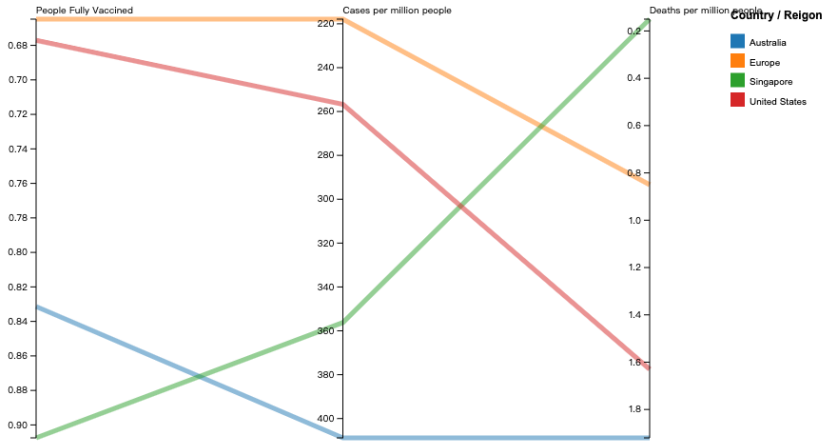
A huge roadblock came from the very unique circumstances in Mainland China right now. The cases/deaths in China are **dramatically low compared with other countries** but it was caused by very strict Chinese Covid Control laws. I ran through multiple datasets and found out that I was not able to explain this unique circumstance without **analyzing three or more datasets (travel ban, covid test amounts, import ban, etc.)** and it is also hard to find datasets from Chinese government that are comparable with that in other countries (language difference, a lot of websites blocked/hard to reach…) In the end I have to compare Singapore Covid control with countries with **similar covid control direction** (i.e. lifted hard travel ban around 2021 compared with China).
Also, I received a suggestion to change 1.A to a grouped bar chart in class (use monthly data to reduce the effect of absent data or irregular data like fewer cases reported during weekend) but in the end I believed **line graphs** can achieve a similar effect using **rolling average**.

The current d3 visualization (w/ rolling average calculation) on development are shown below:

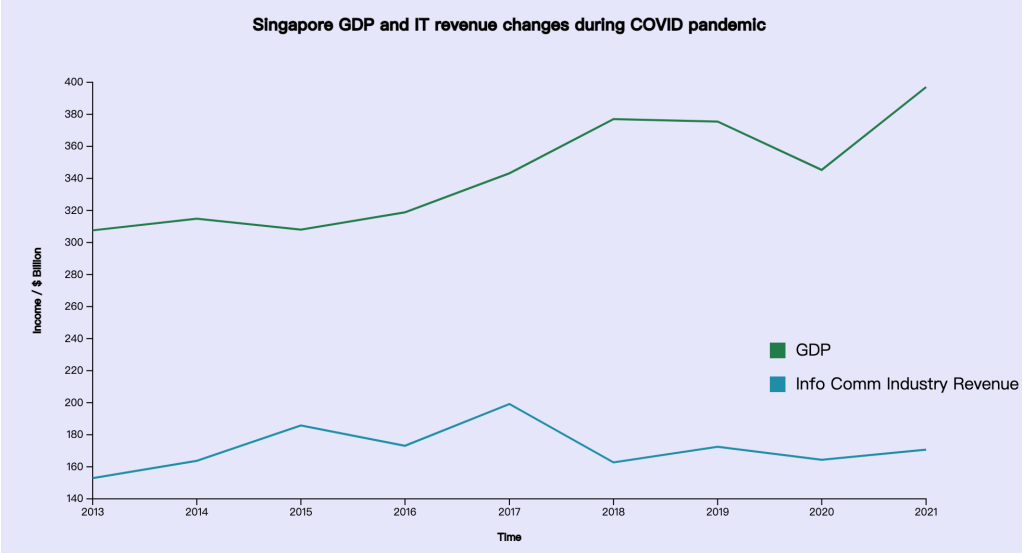




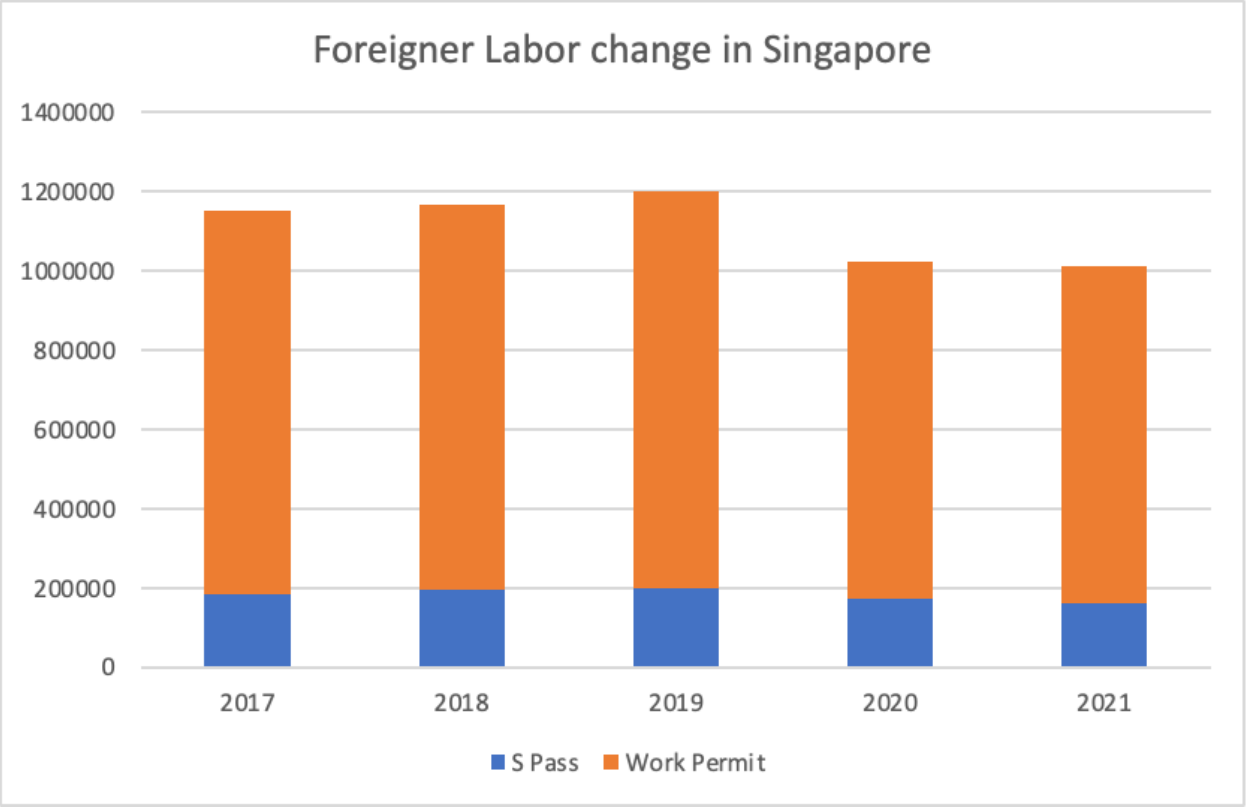
1.B - [OLD]A **Line Graph** of foreign entries between Mainland China, Singapore and US (highlights the restriction by China government)
[NEW]A **parallel coordinates** of different covid data at latest date
Reason to abandon study on Chinese restriction is mentioned in the previous section. Also it is a chance to use **parallel coordinates** which is a more complex visualization.
Current graph in development is follows (more dimensions will be added if I can find more data and/or for more countries):



2.A - A Line Graph of GDP change and IT industry growth over years
Most of the time was used to **find data of revenue**, which is hard as hell for people who have never been in Singapore.
I finally found data here in this week, at certain section in this organization's annual report:
https://www.imda.gov.sg/About-IMDA/corporate-publications/annual-reports
Current d3 graph in development is follows:



2.B - [OLD]A Line Graph Age Pyramid of Foreigner employment trend change (Regular worker and skilled worker) in Singapore
[NEW]A **Stacked Bar Chart** of Foreigner employment trend change (Regular worker and skilled worker) in Singapore
I've actually finished the Age pyramid in d3 previously but it doesn't make too much sense since the S pass's number is **too little** compared with the work permit. By using a stacked bar chart I can highlight that the reduction in foreigner labor change during covid period is caused by work permits (more related to blue-collar workers), not S passes (more related to high-tech workers).
A temporary Excel version of this bar chart is shown below



3.A - A **Scatter Plot With Color (Suggested by Marisa)** of companies moved to Singapore

Data collection is still in progress so I couldn't start the visualization coding. I'm willing to take a penalty for this one 😕
I will probably change the "tech company's size in Singapore" data to "company jobs opened during the pandemic period which was shown in news". This is because finding news like "Company ### opened a new office in Singapore which can bring over 200 new jobs" is much easier than finding public reports from companies with labor related data. Even companies like Amazon and eBay rarely do this when it comes to international offices.

Upcoming milestones:

Date	Schedule	Status
10/19	- Finish investigating, finalize the field of data to find, especially in 2.1 (Show overall employment status? Or only IT-related?)	Finished. Employment modified to show skilled worker status (IT-related data not found)
10/23	- Finish proposal - Finish all data Collection - Finish all data processing	Proposal Finished. Website built Data Processing - In progress.
10/30	- Finish graph 2.a, 2.b	1a and 1b data changed - China problem abandoned. 1a and 1b visualization finished early
11/06(Alpha Release - 11/02)	~~- Finish graph 3.a~~ FAILED	Can't finish: company data hard to find
11/13	~~- Finish graph 1.a~~ ~~- Finish as many interaction-related features as I can~~ - Get rid of company data ASAP - Finish graph 3.a	
11/20(Beta Release - 11/16)	- Finish Beta Release Video - Wrap up basic functions - Implement visualization	
11/27	- Gather news, event, government policies that is related to the graph - Implement events to the graph	
12/04	- Write report, Add additional feature (scroll effect etc)	
12/11 (Presentation - 12/05)	- Write report	
Draft - 12/12 Everything - 12/15	- Write report	