Weekly Diary Entries

Week 9

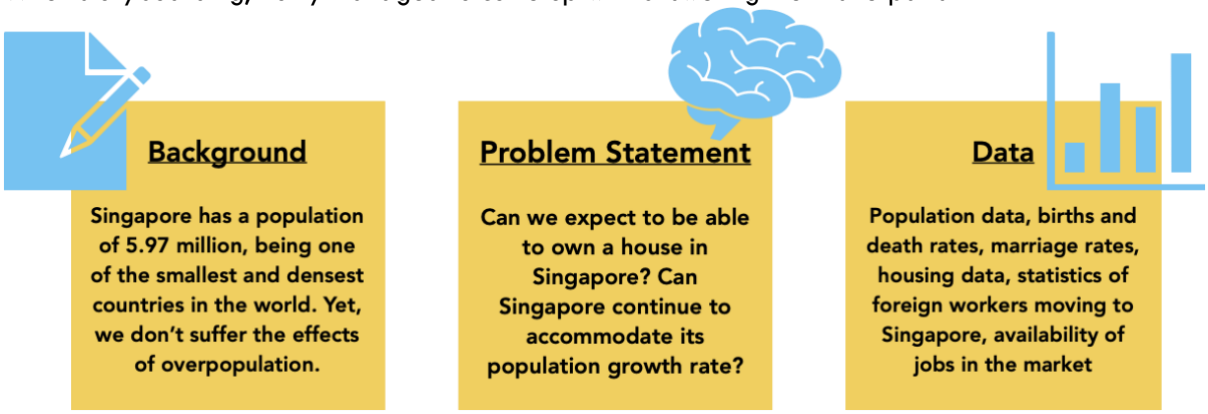
After exploring many different topics and finding available datasets, I finally decided on a topic that is interesting, feasible and relatable! I decided on something closer to home, and intriguing for people of my generation. It's also a question that I have been thinking about for the longest time…

"Would I be able to own a house in Singapore after I graduate?"
"Is there enough space left for me in Singapore?"

I also chose this topic because of the abundance of data surrounding it that I may use for my investigation and analysis of the question. A lot of population data is available on SingStat, plus I can use other housing and job data which would be useful as well.

I decided to name my project SPACE since the central theme of my data story surrounds spatial availability/scarcity.

When storyboarding, I only managed to come up with answering the first 3 parts:



Week 10

What is your project about? Spatial availability in Singapore

What is the data you plan to use? A data set with population indicators, housing, and job availabilities. Here's a link to the full data set: dataset_space.xlsx

What is the question you plan to answer? "How much space is there left in Singapore?" It aims to investigate whether Singapore can continue to accommodate the growth rate of its population in years to come.

Why is this an important question? According to World Data.info, the population of Singapore had grown from 1.65 million in 1960 to 5.45 million in 2021. As one of the smallest countries in the world with a land area of 728km^2, we are also one of the most densely populated countries with approximately 8000 people per square kilometre. With this overarching threat of overcrowding and overpopulation, Singapore still encourages a high influx of immigrants. Therefore, can Singapore really ensure that quality of life is not sacrificed as the population keeps growing?

Which rows and columns of the dataset do you plan to use, to answer this question? I plan to use the most recent available data from 1980 – 2022 since I plan to answer a question that involves looking

into the future. Therefore, a wider range of data dating back to 1980 up until 2022 can provide clearer trends for more accurate predictions. I acknowledge that there will be anomalies in my dataset between 2020 and 2021 due to the impact of the Covid-19 pandemic which left a significant effect on the general trends seen.

1. Total Population, Resident Population, Citizen Population, PR Population and Non-PR Population.
2. Residents 65 years old and above, Youths aged 0-19 years old.
3. Total Fertility Rate (Per Female), Total Deaths (Number).
4. Total Marriages (Number), Total Divorces and Annulments (Number).
5. Resident Households by Type of Dwelling.
6. Total Employment Level by Industry.
7. Annual Average Job Vacancy.

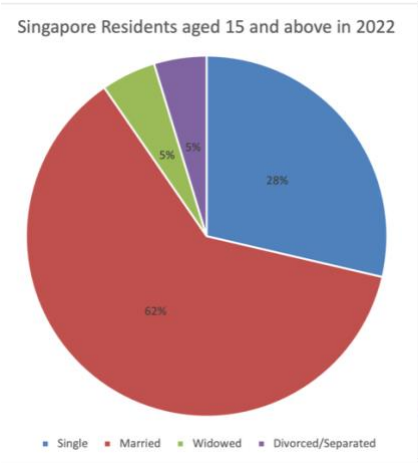
Week 11

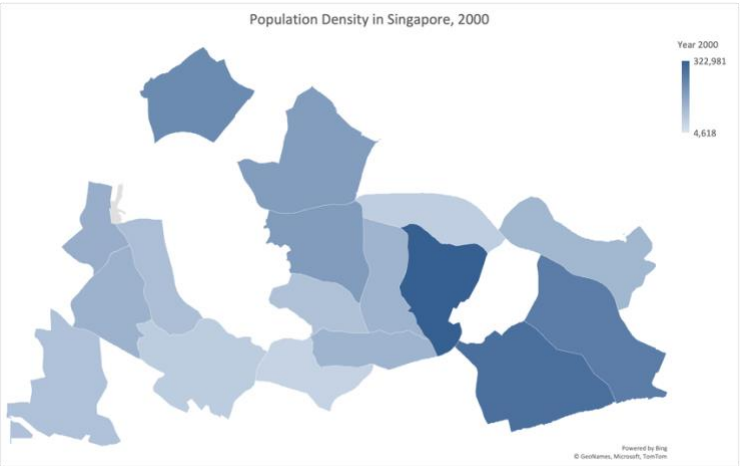
This week, I spent a lot of time diving deep into the data and trying to make sense of it to form logical connections to my research question. I prepped the data to ensure it was suitable for processing and analysis.

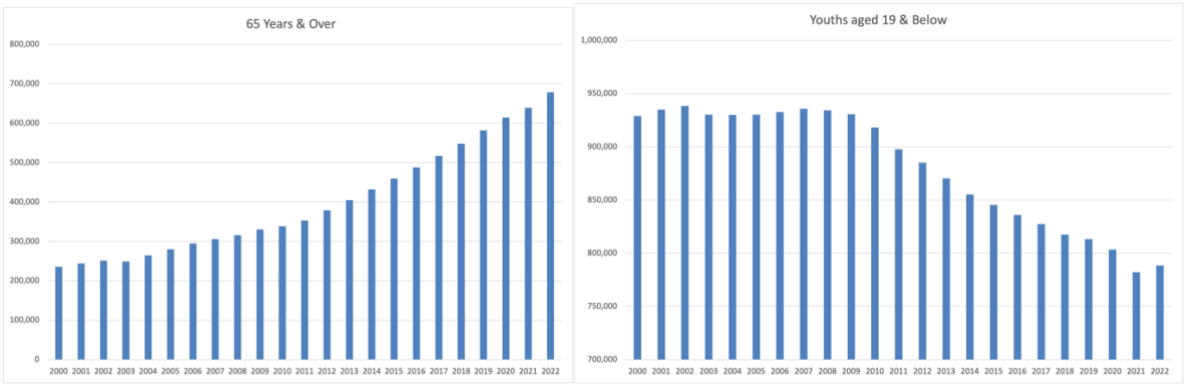
Since a lot of my data surrounds a significant trend over 20 years, I believe it was most suitable to use line graphs/bar charts to highlight the increasing/decreasing nature of the data. Pie charts are also an apt visualisation method to show a breakdown of the category within a single year, therefore I plan to use a pie chart to show the comparison between marriages and divorces within a single year.

Furthermore, since my project is on space, I wanted to add geographical visualisations such as map charts with degrees of colour shading to show population density and changes over 20 years. I tried to explore methods to do this, however many different softwares do not support or contain the database of detailed regional areas in Singapore. As seen below, there are missing regions within the population map. Therefore, for this visualisation, instead of making it interactive where readers can click on views to change this visualisation, I might do a presentation of the data in a way that is set (e.g. a showing of the population changes over time, like in the gun violence deaths example done in Week 10 Tutorial).

I added draft visualisations that I made in Excel below.







Week 12

Concepts & Challenges

encountered while making the data story; documentation of coding

Week/Topic	Utilisation of Concepts	Directory
2/ Paths, HTML, CSS	**Relative paths with confidence** **HTML and CSS elements** Used CSS styling to create the general look of my page. Created buttons for users to toggle intuitively. Used tag to separate content and organize it. Used tag to create a list for my navigation bar. Used <img src> to embed images and charts into my page. Used different <h1> and <h2> tags to organize the header titles on my page. There were underlines on my nav bar menu items as they were links. Therefore, used CSS and changed text-decoration to "none" so that it would not appear to have been clicked before. Created classes for different components on my page and gave them special attributes in CSS. For e.g., mouse hover on the navigation bar will make words pop bigger	(../css/appstyle.css) (index.html:50) (see index.html) (index.html:22) (index.html:38,54) (see index.html) (appstyle.css: (appstyle.css:68,83)
3/ JS	Variables Created variables for my functions. Conditionals	(main.js:5) (main.js:12)

	Created a nav bar but found it hard to access it as I had to scroll all the way up/down to click on it. Therefore, used JS functions to make a sticky navigation bar, with the 'if…else…' statement.	
4/ JS	Functions Created a function to change the graph shown when button is clicked. Objects DOM Used DOM, and "getElementById", to attribute to a specific button, and event listeners to change the graph shown when button is clicked Debugging through outputs Commenting Code	(main.js:21-41)
5/ JS	Model View Controller Coding colour Global variables Event Listener Added event listeners to my buttons	(main.js:21-41)
6/ JS	Arrays and Lists For Loop While Loop Accessing objects (and properties) within loops	
7/ Charts	Chart.js	
8/ Charts	Data visualisation	