Homework Week 10
FIT3179
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Dataset:
Data combination of Kaggle and government dataset in research of the Singaporean public transport from 2004-2014. The data is reasonably old, but no newer data can be found in the internet. Hence, the implication would be, the data would not be suitable for any future prediction due to its time obsolescence, but good for analyzing the past and observe how Singapore as a country has developed its way of being one of the country with the best public transport service across the world.

Source:
1. Kaggle's Dataset
https://www.kaggle.com/datasets/yxlee245/singapore-train-station-coordinates
2. Lim Chee Aun's Dataset
https://observablehq.com/@cheeaun/list-of-bus-stops-in-singapore
3. Singapore's Government Public Data Bank
https://data.gov.sg/dataset

Data Cleaning Process:
Most of the data are taken directly from the dataset found in the internet. With minor data analysis require in changing the layout from wide to long formatting using excel.

Visualizations:
- Map: to visualize the exact location of the bus stops and railways stations placed across the country. It allows user to know which part of the country has more or less stops or source of public transportation.
- Stacked Bar: To show the proportion of the different type of public transportation method that the people could use. Better in terms of showing contrast and contribution toward the whole number
- Line Chart: To show the year to year commute time for each different public transportation available for people to choose from. The line chart provide a good comparing tool to depict the different easier.
- Donut Chart: To contrast the different proportion of the MRT and LRT stations, which in this case are very different.

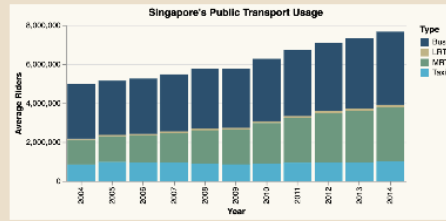Link to visualization: https://dtwjy.github.io/Homework_Week10/

Singpore Public Transport 🇸🇬

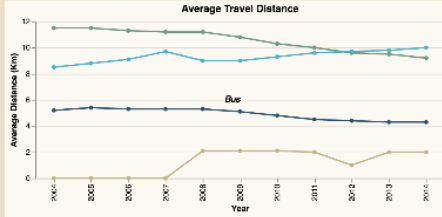Amazing insights of Singapore's Public Transportation System.

🚶 Mode of Transport

As one of the best country with access to extensive mode of public transport, Singapore offers its people different way to travel, from railways of **MRT** and **LRT**, to traditional **bus** and **taxi** .

The data suggest that the user of each of the mode of transport has vary from time to time, with **bus majorly being the most popular within the year of 2004-2014.**

Singapore's Public Transport Usage

Type of Transport: Show All

Average Travel Distance

Eventhough **bus** is mostly use by people as the mode of transport, it appears not to be the one that people are travelling for a long distance trip. While **MRT** **and taxi are mostly used for longer distance travel** with an average of 9-10 km trip.
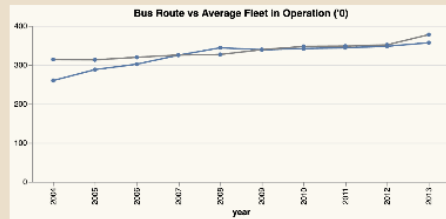
Meanwhile, **LRT** was ranked last due to its limited number of stations it operates in that is generally newly introduced in 2008.

Type of Transport: Show All
Year Start: 0

🚌 Road Vehicle

There are **more than 5,000 bus stops are placed across the country.** In which, the average fleet are reaching more than 3700 in 2013.

In fact, in 2009 Singapore had closed down 5 routes while still operating more buses compared to the previous year. On contrast, in 2008 the average of buses has actually decreased with the increasing number of routes in the operation.
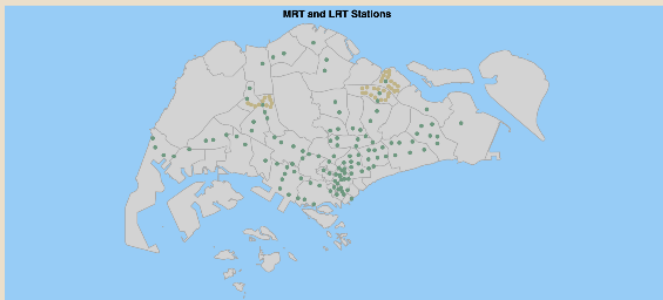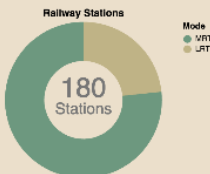
Bus Route vs Average Fleet in Operation ('0)

Bus Stops 2022

Zoom: 50000
Region: Default

🚆 Railways

The other alternative mode of transport is using Singapore's railway system which comprise mainly **MRT** and **LRT**. Since at the beginning we have noticed that the use of **LRT** is the lowest accross other type of transportation is mainly due to its limited number of stations available across the country.

Meanwhile, **MRT** and **LRT**, are well integrated to each other, which ease the process of transferring. As we could see on the map, stations are spread all across the country.

Railway Stations

Mode
MRT
LRT

180 Stations

MRT and LRT Stations

Type Selection: Show All