DATA5002 25T3 Assignment 2 Proposal

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1 Datasets Overview

In this project, we want to analyze the monthly entries and exits of some major stations in Greater Sydney area. The dataset initially contains monthly entries and exits of stations in Sydney over The dataset will be cleaned and some other necessary variables such as facilities in every station, rent at surrounding areas, weather will be added to make this analysis project more complex and meaningful.

2 What we plan to do

We plan to investigate the footfall of each station to provide an overview of how busy a station is. Some stations may have significantly more footfalls than others. This may indicate potential business opportunities around that area. For some chain stores that want to have more stores around Sydney but wondering where will be the best place, or for government officers who try to investigate the need for station expansion or facilities installment, this report may be useful. We plan to develop a web page containing both interactive parts and static parts.

2.1 Target audiences

This gives our two target audiences:

1. Joe – The Aspiring Transport Analyst (21 years old) Joe is a 21-year-old junior government officer working in Sydney's Transport Analysis Department. Having recently joined the public sector, he's been assigned to help assess the current state of transportation across the city and prepare recommendations on how to improve commuter satisfaction. Joe comes from a background in media and communications, so the world of data analysis, visualization, and statistical modeling is still quite new to him. He's keen to understand how numbers can tell stories about how people move around the city — where congestion happens, which routes are most efficient, and which suburbs might need immediate attention. For Joe, a clear, intuitive dashboard would serve as both a learning tool and a decision-support system. He's looking for something that simplifies complex transport data, helping him quickly identify patterns, trends, and problem areas. Ultimately, Joe hopes to translate data-driven insights into actionable advice that can guide short-term policy decisions to make Sydney's public transport more efficient and user-friendly.

2. Steve – The Opportunity-Seeking Businessman (45 years old) Steve is a 45-year-old entrepreneur with over two decades of experience running small retail businesses in Sydney. Lately, he's been planning to open a new store — possibly one that sells daily essentials or uniquely Australian souvenirs — but he wants to make sure he chooses the right location before investing. For Steve, success is closely tied to foot traffic. The more people who pass through an area, the greater the potential for sales. He's not as interested in transport operations or commuter satisfaction as he is in understanding where and when people gather, which train stations or bus stops attract the most movement, and which suburbs have growing activity that could signal new commercial opportunities. An interactive transport footfall dashboard would give Steve the insights he needs to make data-driven location decisions. By visualizing pedestrian volumes, public transport usage, and temporal trends, he could identify prime hotspots for new retail ventures — helping him stay ahead in an increasingly competitive market.

We will not only try to investigate the overall most popular stations, but also try to find the stations that has continually increasing entries and exits. For businessman, we will also provide some insights into the average rent, what are the characteristic and preferences of people living at the suburb. For government officers, we will provide some information about potential reason for some trends worth attention.

2.2 Hypothetical situation

For example if significantly more people enter and exit at Burwood station, which may indicating more Chinese(assuming more elderly) living in that suburb. On one hand, the government can consider make the information displayed in the station more understandable for Chinese old people for their convenience. And may also have more volunteers or ticket clerk at such station to help as Chinese elderly may be more familiar with cash payment rather than card payment, and may not be familiar with the ticket selling machine. Also, wheelchair accesses will be important. On the other hand, for businessman, elderly are more willing to go to market to buy their daily necessities such as food. And for food, they probably will prefer something they used to eat in China. Then it will be a good opportunity to open a market and find an appropriate food supplier.

3 Similar work

We are inspired by the following materials WHO COVID-19 Dashboard, Shiny.paho dashboard1, Shiny.paho dashboard2, ITF dashboard, NSW Rent and sales report - interactive dashboard NSW Customer Satisfaction Index dashboard

4 Acknowledgement

I appreciate on those organisations or individuals that share their dashboards, webpages or reports to public for reference. Also thanks ChatGPT for helping me to build more detailed personas.

5 Wireframe

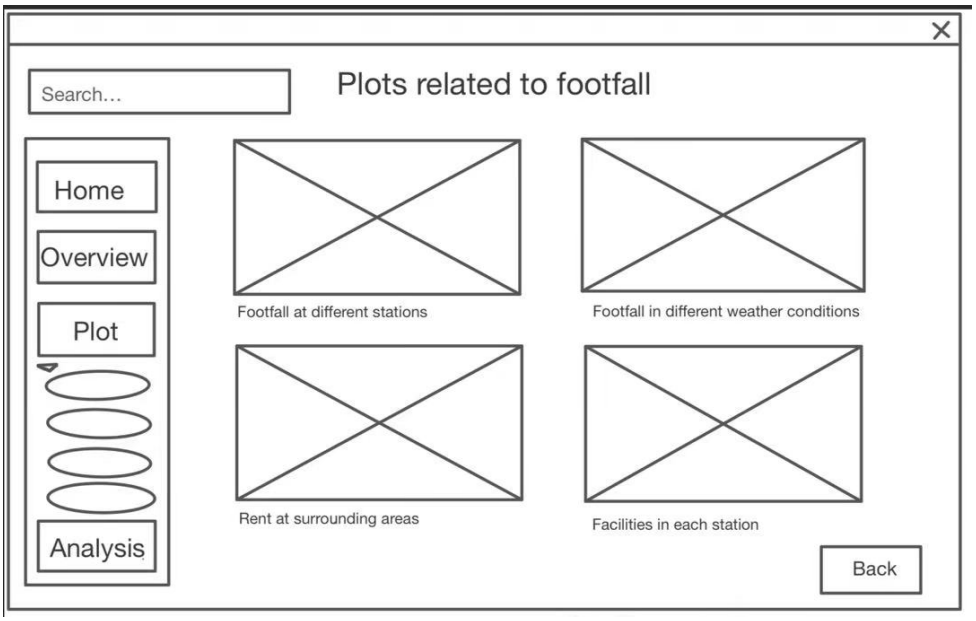

Figure 1: Wireframe