

Private Car Resale Market in Singapore User Guide

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1. Getting Started

Application Link: <https://cherry9554.github.io/>

Our application consists of 5 sections: Home, Overall resale market analysis (treemap), Market analysis on vehicle types and car brands (bubble chart), Correlations between price and key factors (scatter matrix), and Car age profile analysis (radar chart). User can jump to a specific section by clicking the icons at the home page.

2. Visualization Guide

2.1 Problem Overview

PRIVATE CAR RESALE MARKET IN SINGAPORE

Prices of new cars can be too expensive for price sensitive individuals to afford. However, through the used car market one will be able to afford the convenience of owning a car. For budget conscious individuals, buying a used can be a great way to save money. On the other hand, owners of existing cars interested to make a sale can enjoy savings from its successful sale. Hence, understanding the used car market can prove to be useful for individuals looking to sell / buy a existing car.

- Treemap**
We provide an overall market analysis on resale cars to show the most popular car brands available for sale.
- Bubble Chart**
We provide a deeper understanding of different vehicle types available in the resale market based on price and quantity.
- Scatter Matrix**
We help to identify relationships and correlations across different key factors affecting the price of a resale car.
- Radar Chart**
We help buyers to understand different car age profiles based on critical factors such as COE remaining, depreciation, engine power, mileage and price.

This is the home page of the application. It states the motivations and objectives of the application at the top. At the bottom, there are 4 icons linking to different sections and there is a short description of the section below each icon.

2.2 Analysis

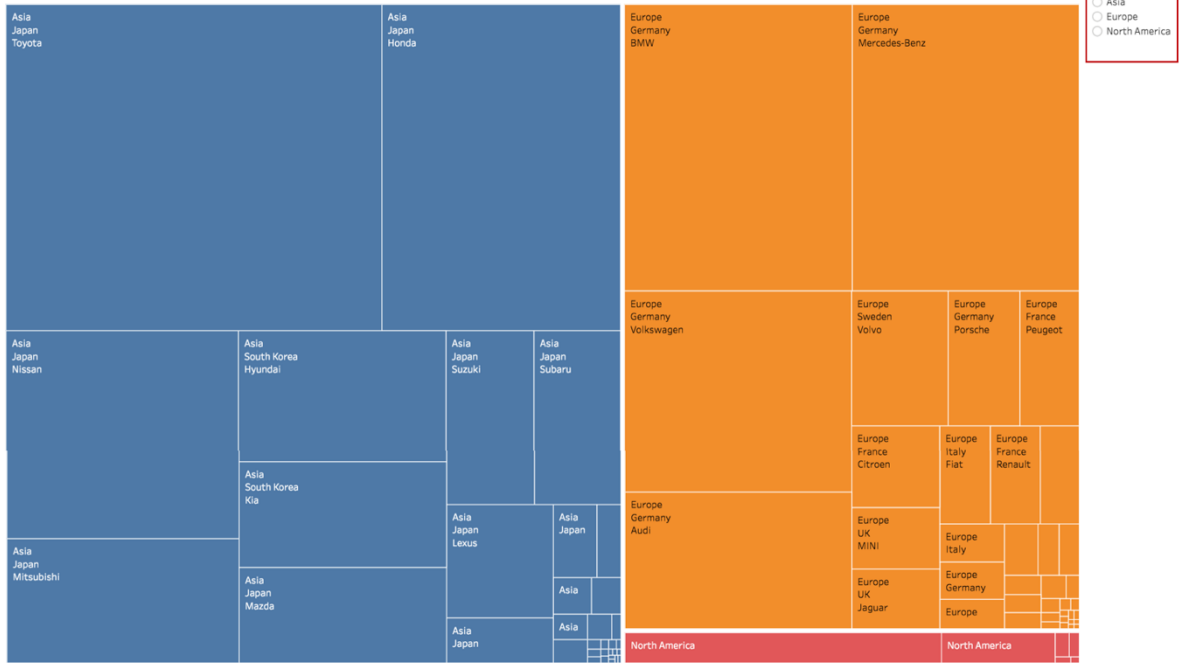
2.2.1 Treemap

Home Page



Overall Resale Market Analysis

Treemap of Car Brands



This treemap is to provide an overall market analysis on resale cars to show the most popular car brands available for sale. User can click the filter at the right of the treemap (highlighted in red box) to further drill down by continent. Besides, user can click the icons at the top of the page to jump to other sections, including the home page.

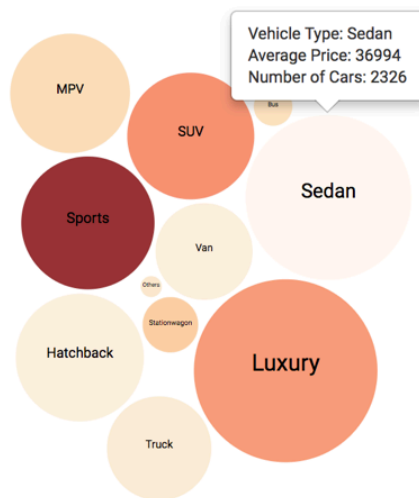
2.2.2 Bubble Chart



Market Analysis on Car Brands & Vehicle Types

Select Vehicle Type:

Average Price (Low -> High)

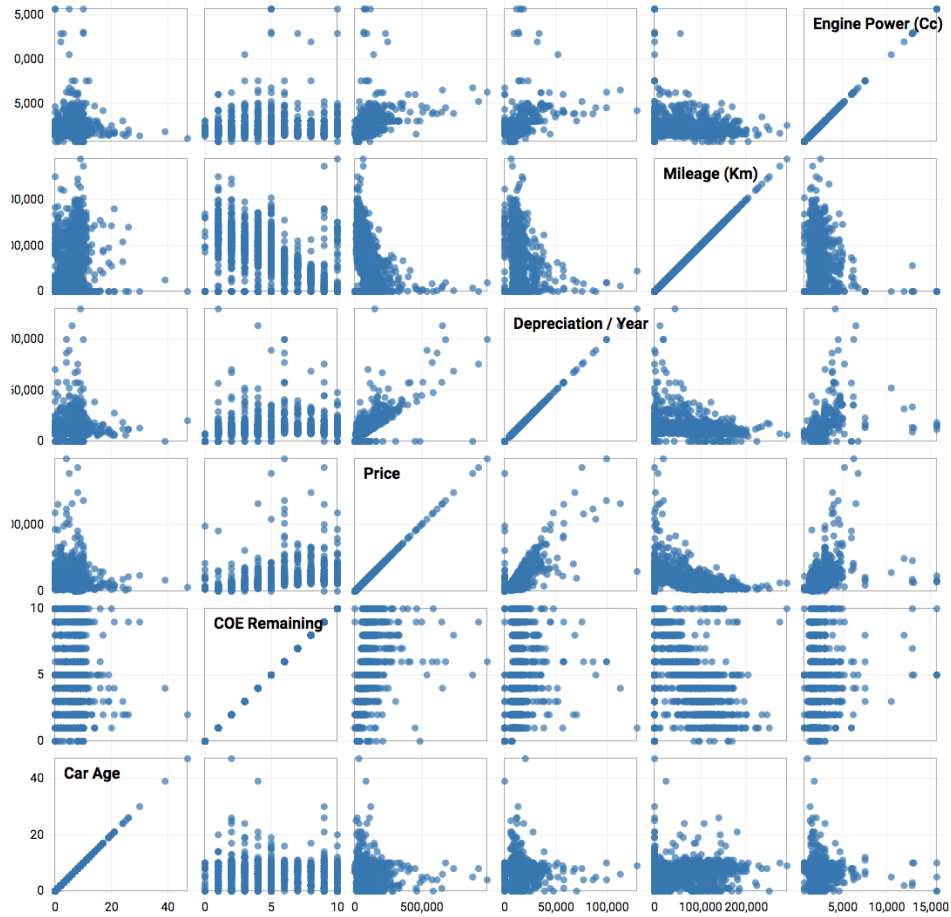


This force bubble chart is to provide a deeper understanding of different vehicle types available in the resale market based on price and quantity. User can further drill down each vehicle type by car brands by selecting the vehicle type using the dropdown list at the top (highlighted in red box). Details including average price and number of cars can be retrieved by hover over on each bubble.

2.2.3 Scatter Matrix



Correlations Between Price & Key Factors



This scatterplot matrix displays the correlations between multiple variables such as Car age, COE remaining, Price, Depreciation/year, Mileage, Engine Power (cc). User could use brushing functions by selecting data points on the graph. Thus, only the selected points will be highlighted and the rest will be colored in grey.



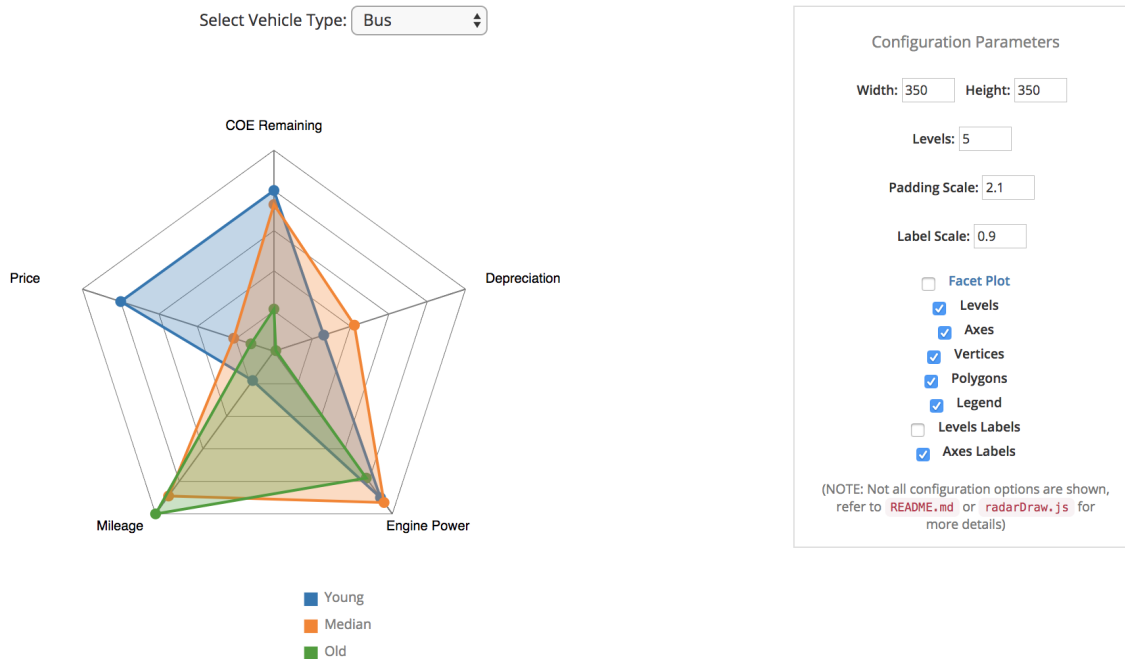
Correlations Between Price & Key Factors



2.2.4 Radar Chart



Car Age Profile Analysis



This radar chart shows the profiles for vehicle from different age groups. User can select a specific vehicle type from the dropdown list. And they could also change the configuration parameters such as width, height, level, padding scale from the right panel.