



Sunny Singapore
SHINING A DIFFERENT PERSPECTIVE

User Guide

By Hsu En Yang, Parth Goda, Pham Anh Kim Chau

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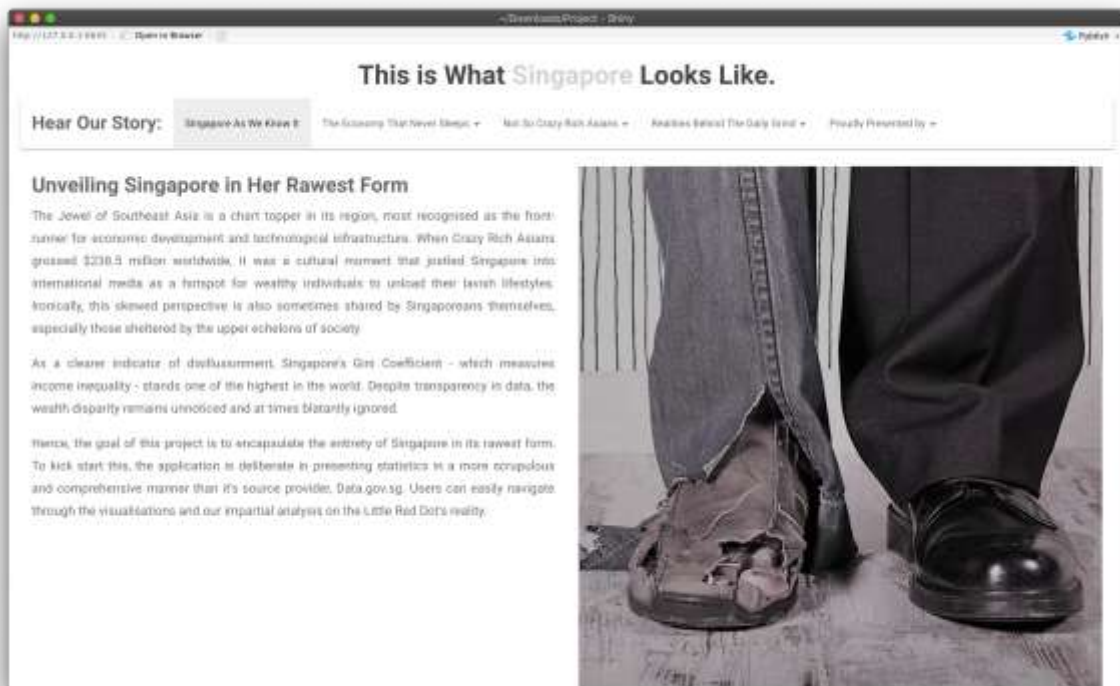
Introduction

This is the user guide for Sunny Singapore Application. The step-by-step guide serves to help users navigate and understand the different aspects of the webpage. Charts are automatically displayed in the various tabs and the data presented can be filtered based on your selected options.

By the end of this guide, you will be able to:

1. Explore the various visualisations
2. Understand the *reality* of Singapore with the support of economic, population and demographic statistics
3. Do your own analysis on Singapore and come up with insights and recommendations

Home: Singapore As We Know It



When you open the application, you will be greeted with this home page with will give you an overview of our application and our objectives.

On the top panel you will notice the following 5 tabs:

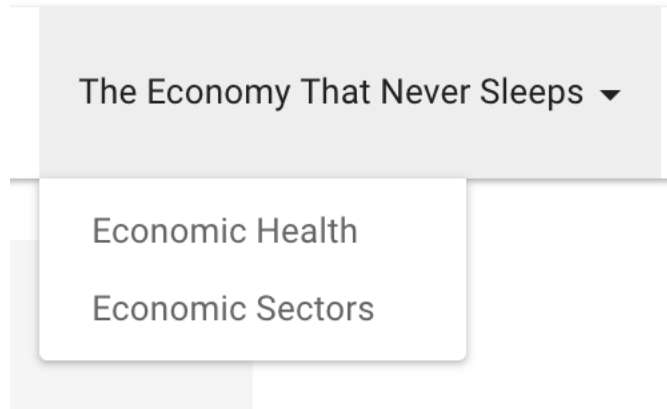
- Singapore as we know it (Home)
- The economy that never sleeps (Economic visualisations)
- Not so crazy rich Asians (Income and Education)
- Realities behind the grind (Housing, Transport and Relationships)
- Proudly presented by (Credits)

You can select one for the above 5 option to navigate through the app and find the information you need. When you click on each tab you will have a dropdown list to choose which area of Singapore you want to focus on.

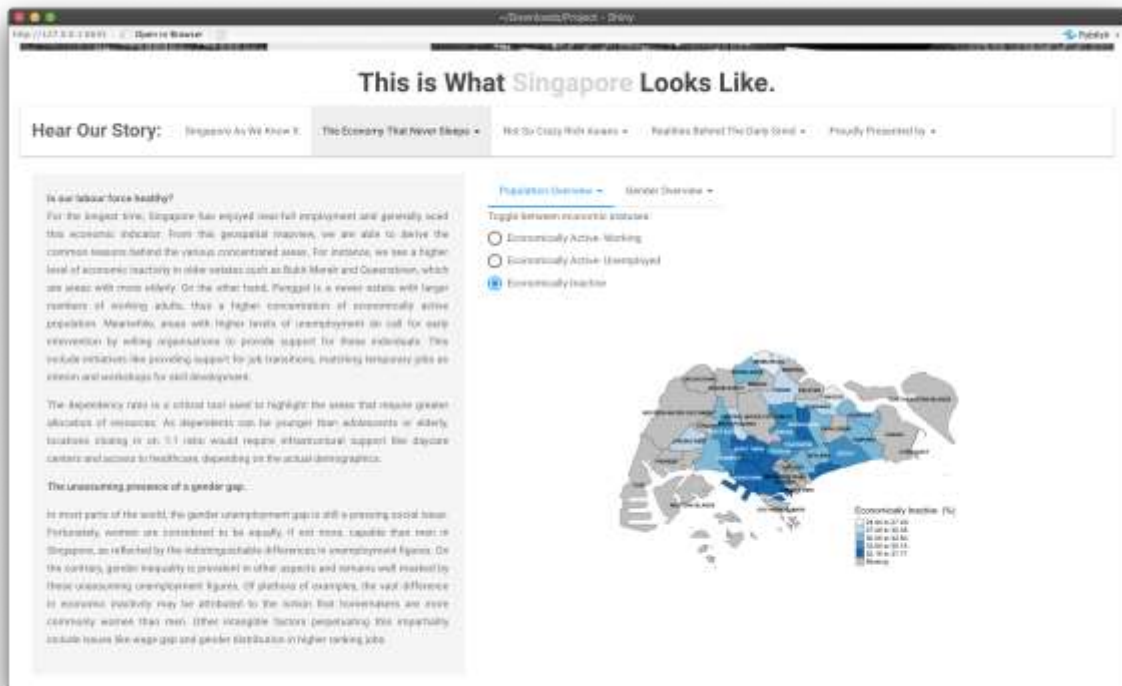
The Economy That Never Sleeps (Economic Statistics)

When you select this tab, you will be given two options to choose from (as shown below):

1. Economic Health
2. Economic Sectors



Economic Health



Here you will get an exposition on the right to get you up to track on the current status of the labour force and also what is going on within the genders of Singapore.

Population Overview ▼

Gender Overview ▼

Toggle between economic statuses:

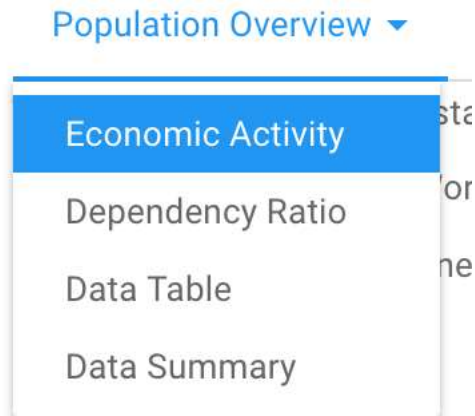
- Economically Active- Working
- Economically Active- Unemployed
- Economically Inactive

On the right, you have two tabs:

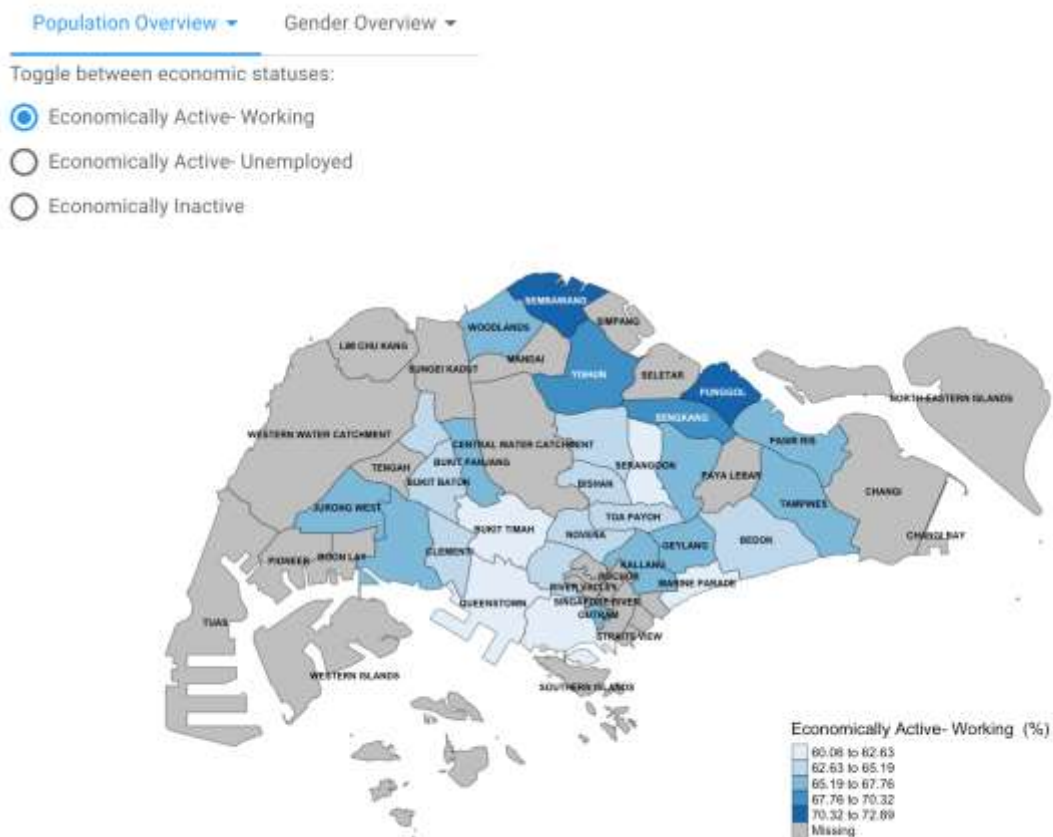
1. Population overview: Here lie the visualisations and data for the economic status of Singaporeans
2. Gender overview: Charts showing how the two genders differ based on their economic status.

Population Overview

When you click on the dropdown button you will see the following options:

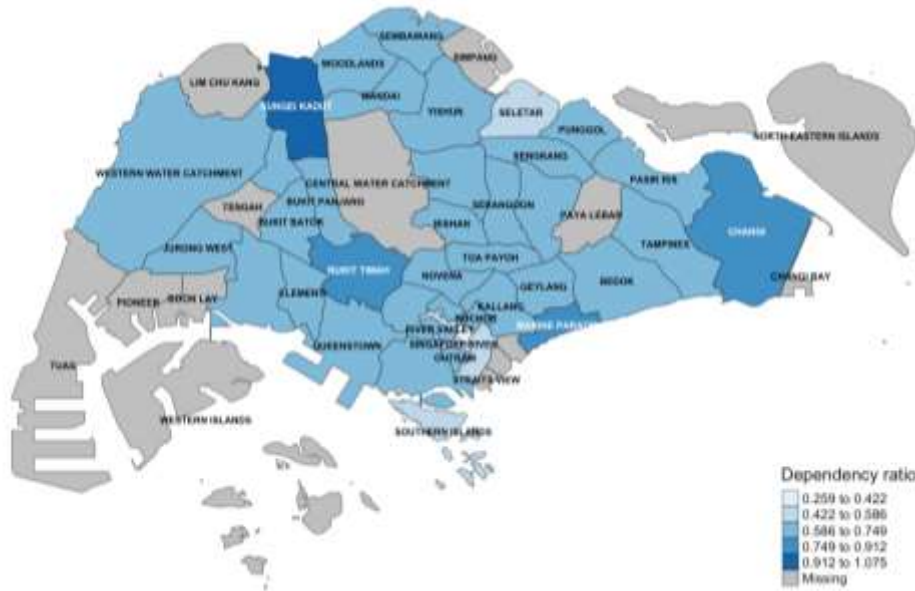


Economic Activity: Here you will see choropleth map charts that compare the different planning areas and the percentages of economic status that you select from (below the dropdown button)



Dependency Ratio

The ratio of sum of young plus old population over the total working population. So, if the ratio is less than 1, the planning area has a sufficient working population to sustain the rest of the population. However, if the ratio is less than 1, the planning area is under a lot pressure to support its entire population.



Data table

All the data used in creating the chart is available for you to look or search through.

Show 10 entries Search:

	Economic Status	Gender	Planning Area	Number of people(1000)	Category
1	Economically Active-Working	Males	Ang Mo Kio	54.9	Economically Active
2	Economically Active-Working	Males	Bedok	82.5	Economically Active
3	Economically Active-Working	Males	Bishan	26.4	Economically Active
4	Economically Active-Working	Males	Bukit Batok	41.2	Economically Active
5	Economically Active-Working	Males	Bukit Merah	43.9	Economically Active
6	Economically Active-Working	Males	Bukit Panjang	45.3	Economically Active
7	Economically Active-Working	Males	Bukit Timah	19.9	Economically Active
8	Economically Active-Working	Males	Choa Chu Kang	52.7	Economically Active

Data Summary

A simple data summary of the all the factors used in the visualisations. Includes category data and quartile data.

Population Overview ▾ Gender Overview ▾

Economic Status	Gender	Planning Area	Number of people(1000)	Category
Length:174	Length:174	Length:174	Min. : 0.00	Length:174
Class :character	Class :character	Class :character	1st Qu.: 2.10	Class :cha
Mode :character	Mode :character	Mode :character	Median :12.50	Mode :cha
			Mean :18.83	
			3rd Qu.:28.98	
			Max. :89.20	

Gender Overview



This dashboard shows the breakdown of each economic status by gender. There are also more options to further filter the data:

- All or only economically active (Top)
- By Planning area (Bottom)

Economic Sector

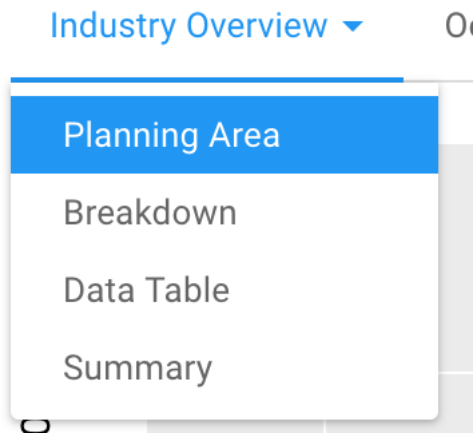
Dashboard:



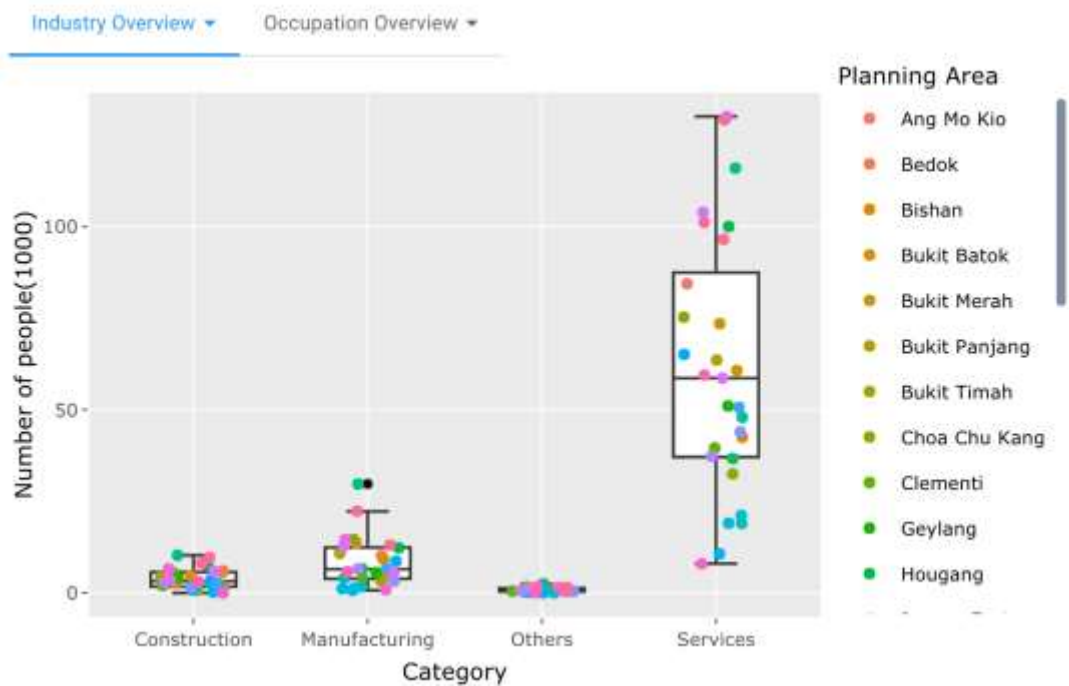
Here you will notice an essay on the right about Singapore's industry as a whole and on the right you our visualisation on the data available.

Industry Overview

When you click on the dropdown button called “Industry Overview” you will have the following options to choose from:

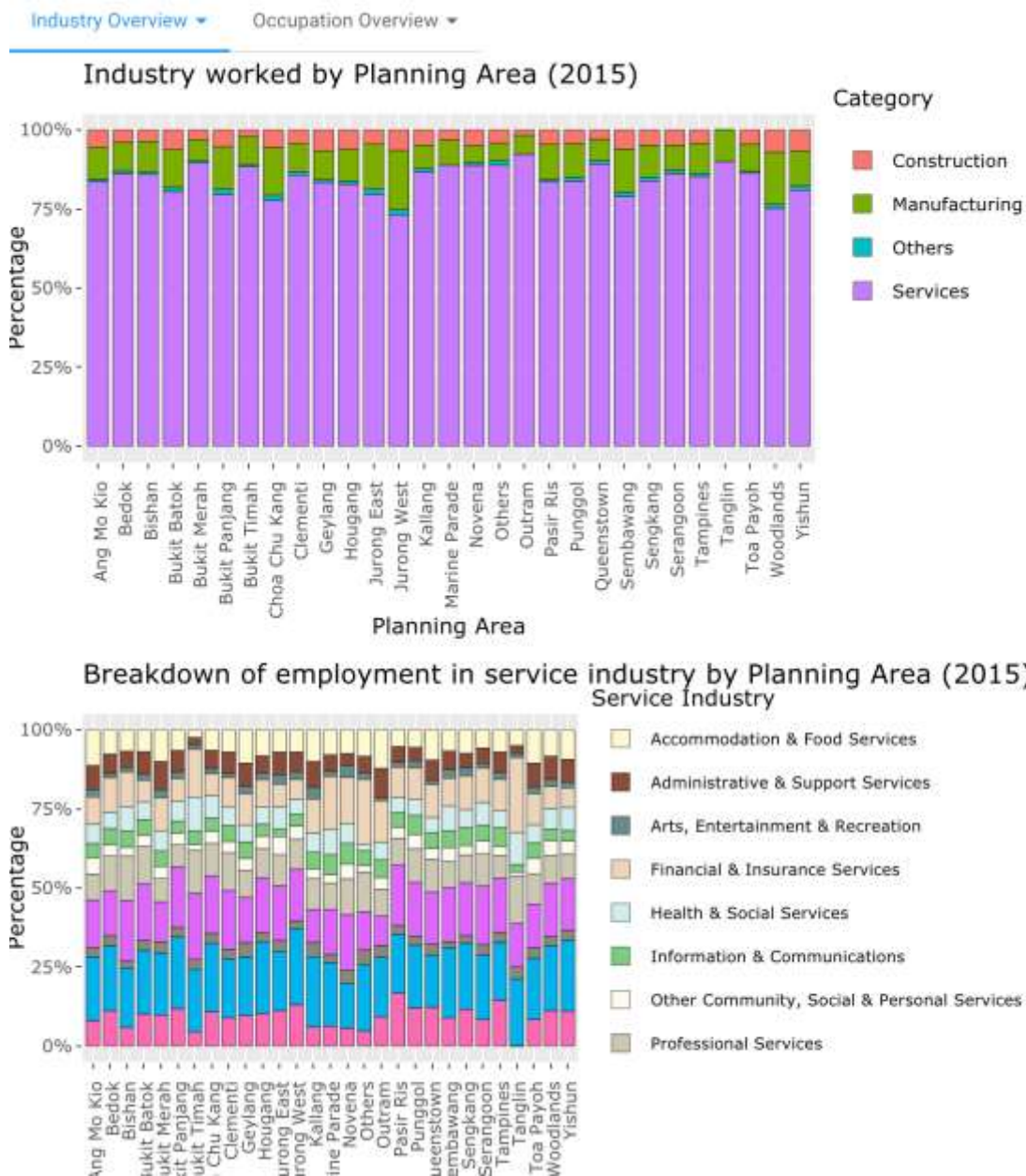


Planning Area



Here you will see a box plot on the different industries in Singapore and its distribution. Each planning area is also represented on the chart as a coloured dot that you can hover over and find more details about.

Breakdown



In the breakdown section you will find two stacked bar charts. The first is the percentage breakdown of the industries in each planning area. The second is more detailed percentage breakdown of the service industry per planning area.

Data table

All the data used in creating the chart is available for you to look or search through

Industry Overview ▾ Occupation Overview ▾

Show 10 ▾ entries Search:

	Planning Area	Industry	Number of people	Category
1	Ang Mo Kio	Manufacturing	10200	Manufacturing
2	Bedok	Manufacturing	13600	Manufacturing
3	Bishan	Manufacturing	4800	Manufacturing
4	Bukit Batok	Manufacturing	9100	Manufacturing
5	Bukit Merah	Manufacturing	5400	Manufacturing
6	Bukit Panjang	Manufacturing	10800	Manufacturing
7	Bukit Timah	Manufacturing	3300	Manufacturing
8	Choa Chu Kang	Manufacturing	14600	Manufacturing
9	Clementi	Manufacturing	4100	Manufacturing
10	Geylang	Manufacturing	5600	Manufacturing

Showing 1 to 10 of 435 entries Previous **1** 2 3 4 5 ... 44 Next

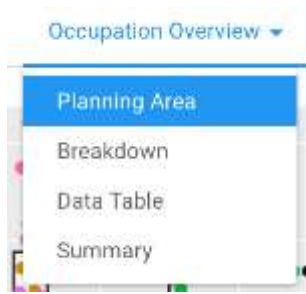
Summary

A simple data summary of the all the factors used in the visualisations. Includes category data and quartile data.

Industry Overview ▾ Occupation Overview ▾

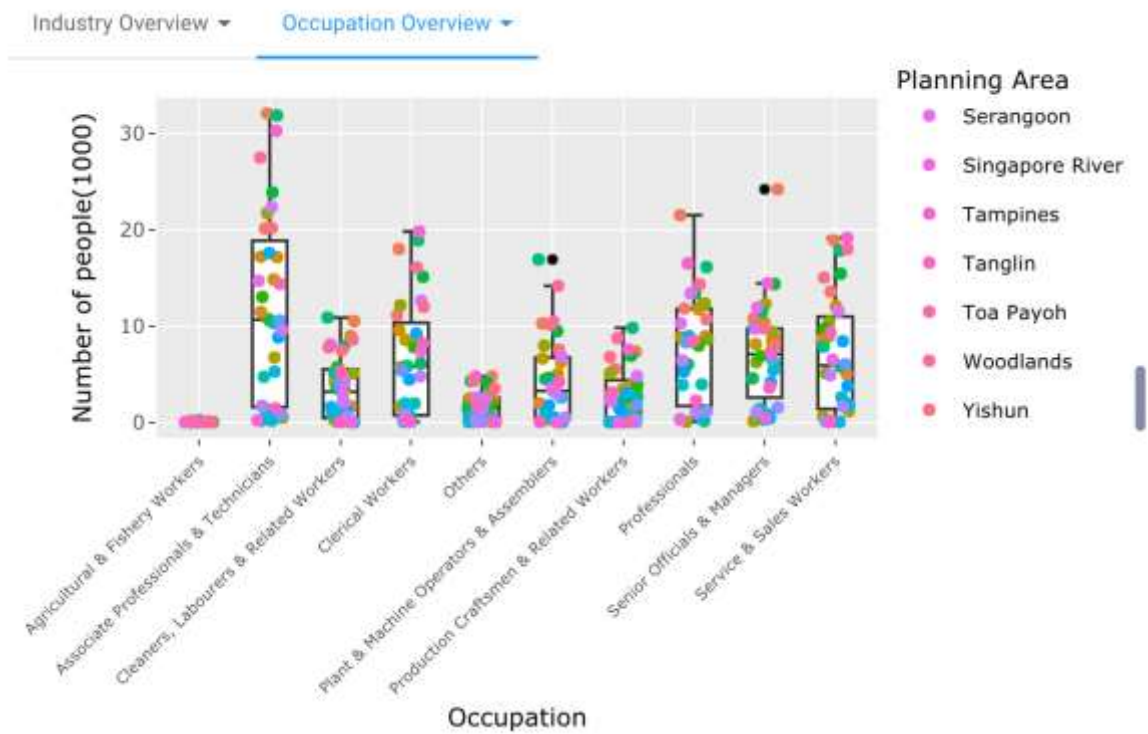
Planning Area	Industry	Number of people	Category
Length:435	Length:435	Min. : 0	Length:435
Class :character	Class :character	1st Qu.: 1500	Class :character
Mode :character	Mode :character	Median : 3300	Mode :character
		Mean : 4948	
		3rd Qu.: 6600	
		Max. :29800	

Occupation Overview



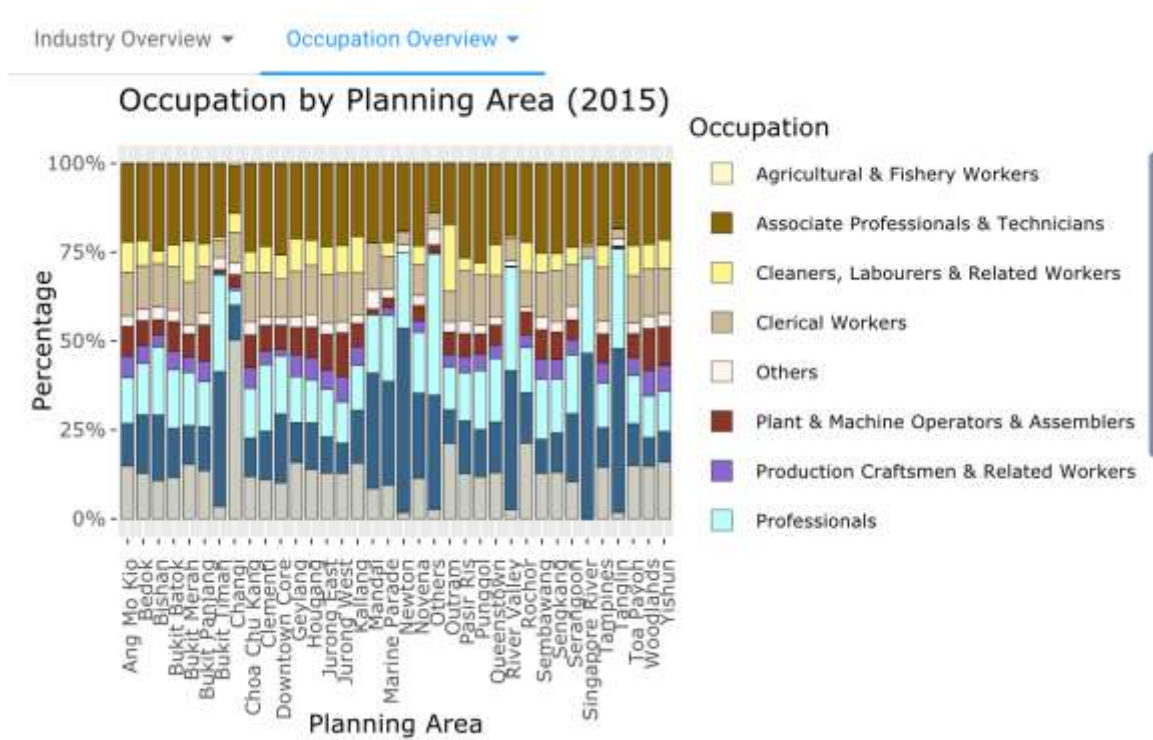
Under the occupation overview dropdown button, you will find the above options:

Planning area



Planning area option contains a box plot of the distribution of people working in each industry per planning area.

Breakdown



Under breakdown section you will find a graph that shows the percentage breakdown of the occupations per planning area.

Data table

All the data used in creating the chart is available for you to look or search through

Industry Overview ▾ Occupation Overview ▾

Show 10 entries Search:

	Planning Area	Senior Officials & Managers	Professionals	Associate Professionals & Technicians	Clerical Workers	Service & Sales Workers	Agricultural & Fishery Workers	Production Craftsmen & Related Workers
1	Ang Mo Kio	10788.0	11819.0	20139.0	11132.0	13569.0	50.0	5524.0
2	Bedok	24211.0	21520.0	32095.0	18003.0	18914.0	41.0	7351.0
3	Bishan	8557.0	8944.0	11469.0	5707.0	5032.0	32.0	1591.0
4	Bukit Batok	10361.0	12333.0	17156.0	9061.0	8734.0	54.0	3927.0
5	Bukit Merah	8477.0	11731.0	17208.0	9572.0	12074.0	20.0	3474.0
6	Bukit Panjang	8120.0	8385.0	14845.0	8562.0	8953.0	102.0	3884.0
7	Bukit Timah	12306.0	8845.0	6743.0	1640.0	1153.0	6.0	271.0
8	Changi	115.0	49.0	159.0	101.0	593.0	7.0	12.0
9	Choa Chu Kang	9382.0	12336.0	21721.0	12173.0	10442.0	83.0	5080.0
10	Clementi	6252.0	8618.0	10741.0	5782.0	5081.0	13.0	1774.0

Showing 1 to 10 of 36 entries

Previous 1 2 3 4 Next

Summary

A simple data summary of the all the factors used in the visualisations. Includes category data and quartile data.

Industry Overview ▾ Occupation Overview ▾

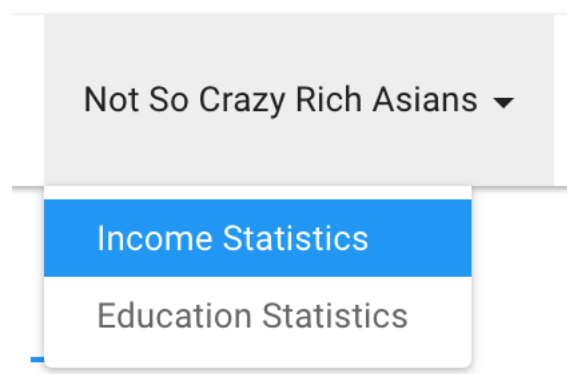
Planning Area	Senior Officials & Managers	Professionals	Associate Professionals
Length:36	Length:36	Length:36	Length:36
Class :character	Class :character	Class :character	Class :character
Mode :character	Mode :character	Mode :character	Mode :character
Production Craftsmen & Related Workers	Plant & Machine Operators & Assemblers	Cleaners, La	
Length:36	Length:36	Length:36	
Class :character	Class :character	Class :chara	
Mode :character	Mode :character	Mode :chara	

Not So Crazy Rich Asians (Socioeconomic Statuses)

The next tab is the income and education statistics tab. When first click on the tab you will be given two options:

1. Income Statistics
2. Education statistics

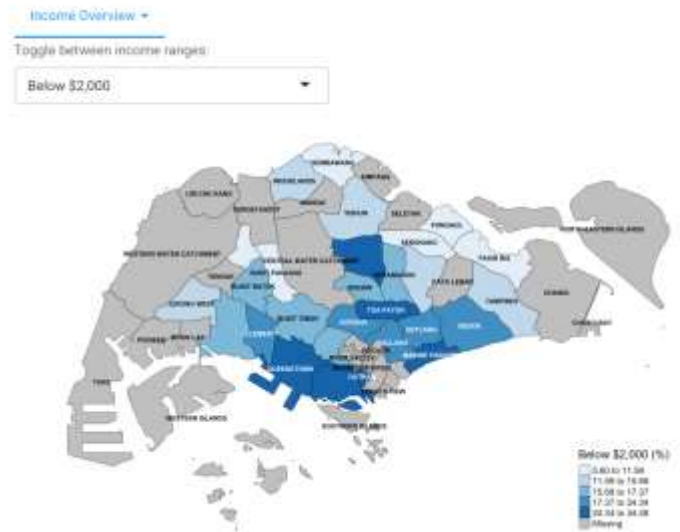
So, go ahead and choose what your which sector you would like to investigate.



Income Statistics

The unspoken judgement when we see an address.
 Interestingly, we are quick to judge the worth of an individual when we hear the answer to 'where do you stay?'. This prejudice, however, may be true to a certain extent in some areas. For instance, Toa Payoh has a larger proportion of lower-middle income groups than the higher earners. However, cases like Marine Parade is a prime example income disparity, which makes it difficult to deduce the socioeconomic status solely based on the home address. While Marine Parade is more commonly known for high-rise condominiums and opulent landed estates, mainly attribute to its sea-view and close proximity to the city, it also houses a high concentration of below \$2,000 population. Ultimately, the scattered distribution of income groups make it fundamentally difficult to ascertain the net worth of an individual based off where they stay.

However, the breakdown of income groups posts that approximately 3 in every 5 people earn less than a five-digit income, which is a far cry from other people's perspective of Singaporeans' wealth.



On this page, you will an exposition on the Income distribution in Singapore (left). The choropleth map chart on the right displays the percentage of the population in each area that is classified under the filter you have chosen on the top right of the map.

When you select the income overview dropdown button you will have the following choices:

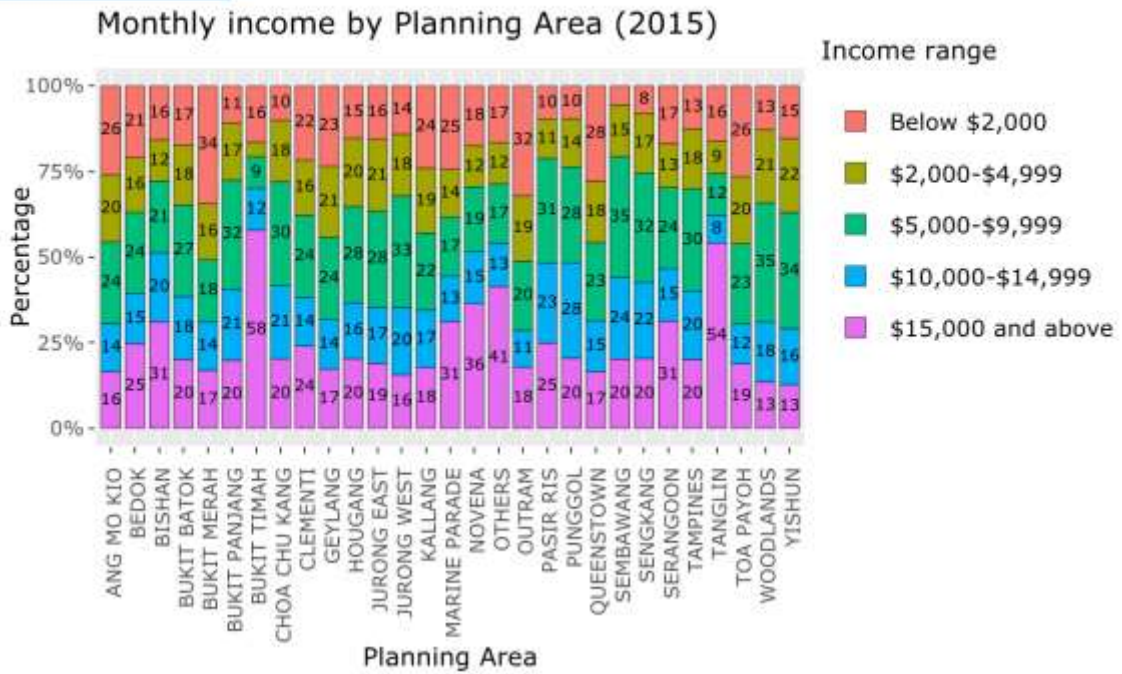
Income Overview ▾

- Distribution by Earnings**
- Breakdown
- Data Table
- Summary

Breakdown

The stacked bar chart shows the percentage breakdown of each income range in each planning area.

Income Overview ▾



Data table

All the data used in creating the chart is available for you to look or search through

[Income Overview](#) ▾

Show **10** entries Search:

	Planning Area	Income range	Number of people(1000)
1	ANG MO KIO	Below \$2,000	16.2
2	BEDOK	Below \$2,000	19.4
3	BISHAN	Below \$2,000	4.4
4	BUKIT BATOK	Below \$2,000	7.6
5	BUKIT MERAH	Below \$2,000	19
6	BUKIT PANJANG	Below \$2,000	4.5
7	BUKIT TIMAH	Below \$2,000	3.9
8	CHOA CHU KANG	Below \$2,000	5
9	CLEMENTI	Below \$2,000	6.6
10	GEYLANG	Below \$2,000	8.8

Showing 1 to 10 of 145 entries Previous **1** 2 3 4 5 ... 15 Next

Summary

A simple data summary of the all the factors used in the visualisations. Includes category data and quartile data.

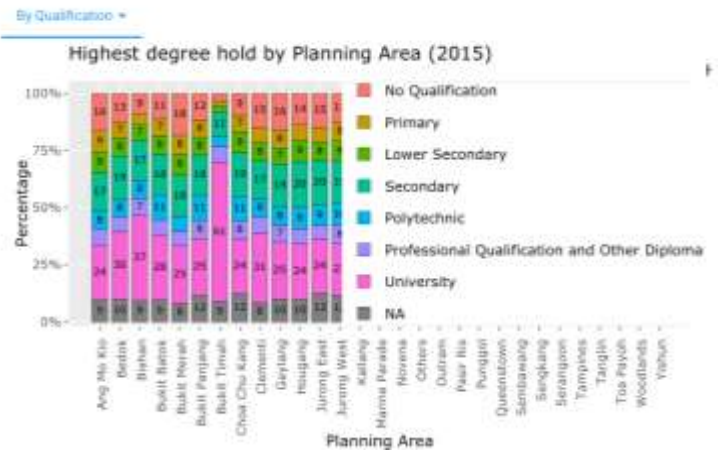
Income Overview ▾

Planning Area	Income range	Number of people(1000)
Length:145	Below \$2,000 :29	Min. : 0.60
Class :character	\$2,000-\$4,999 :29	1st Qu.: 4.60
Mode :character	\$5,000-\$9,999 :29	Median : 8.00
	\$10,000-\$14,999 :29	Mean : 8.46
	\$15,000 and above:29	3rd Qu.:11.20
		Max. :26.60

Education Statistics

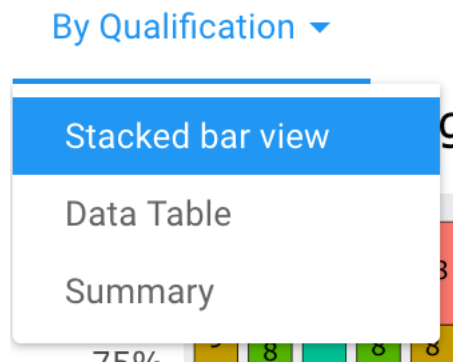
Qualifications Overview

Singapore prides on providing quality and affordable education for its citizens. Yet, the breakdown of qualifications for aged 15 and over highlights that an average 20% of the population have only lower secondary degree and below. In particular, we see a recurring theme for Bukit Merah and Toa Payoh in reflecting the 'poorer side' of Singapore. Conversely, the percentage of people living in the affluent areas of Bukit Timah and Tanglin possessing a university degree is significantly higher compared to those living in other areas. This illustrates that income inequality is often tied to a disparity in opportunities relating to education and other factors that play a key role in determining one's socioeconomic status.



On this dashboard you will notice the exposition on the right to give you a better understanding of the education system in Singapore. On the right you will see a stacked bar chart of the percentage breakdown of education levels per planning area.

If you want to explore more, you may click on the dropdown button “By Qualification” to find the data used and its summary:



Data table

All the data used in creating the chart is available for you to look or search through.

By Qualification ▾

Show 10 entries Search:

	Highest_qualification	Planning Area	Number of people(1000)
1	No Qualification	Ang Mo Kio	23.9
2	No Qualification	Bedok	26.7
3	No Qualification	Bishan	6.2
4	No Qualification	Bukit Batok	11.8
5	No Qualification	Bukit Merah	22.5
6	No Qualification	Bukit Panjang	12.3
7	No Qualification	Bukit Timah	1.8
8	No Qualification	Choa Chu Kang	12.3
9	No Qualification	Clementi	10.1
10	No Qualification	Geylang	13.7

Showing 1 to 10 of 232 entries Previous **1** 2 3 4 5 ... 24 Next

Summary

A simple data summary of the all the factors used in the visualisations. Includes category data and quartile data.

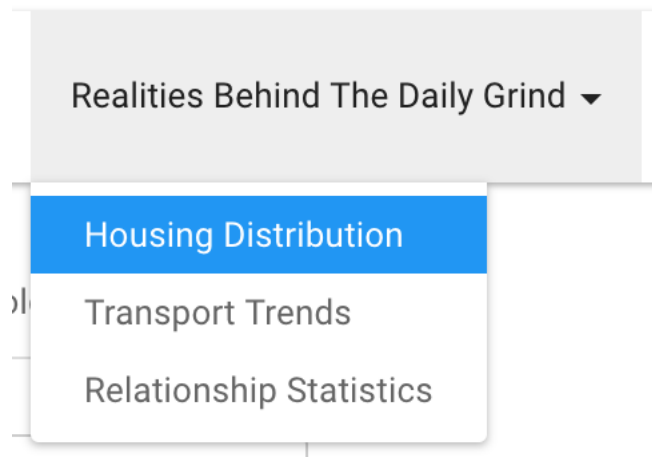
By Qualification ▾

Highest_qualification	Planning Area	Number of people(1000)
No Qualification:29	Length:232	Min. : 0.00
Primary :29	Class :character	1st Qu.: 5.10
Lower Secondary :29	Mode :character	Median :10.35
Secondary :29		Mean :12.71
Polytechnic :29		3rd Qu.:16.75
(Other) :58		Max. :62.90
NA's :29		

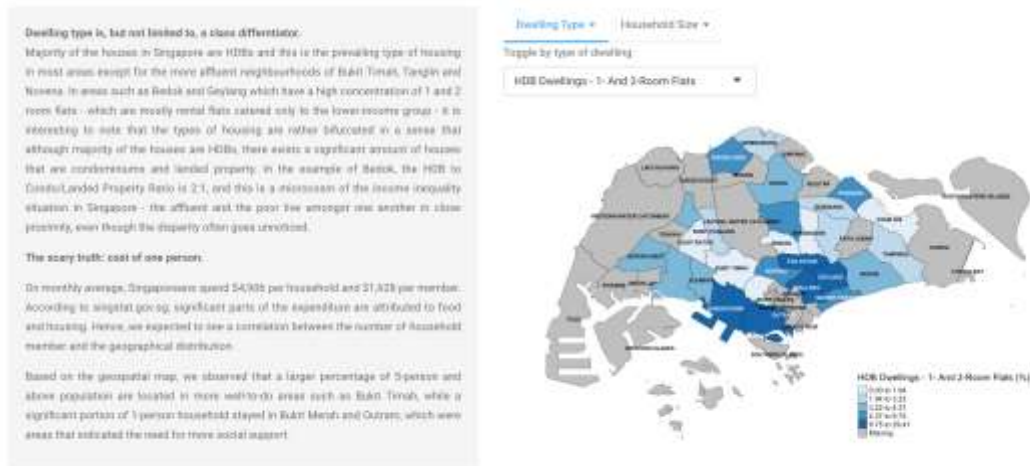
Realities Behind The Daily Grind (Demographics)

Under this tap you will have three option to choose from:

1. Housing Distribution
2. Transport Trends
3. Relationship Statistics

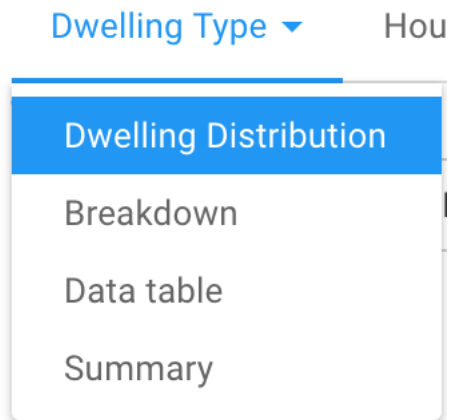


Housing Distribution



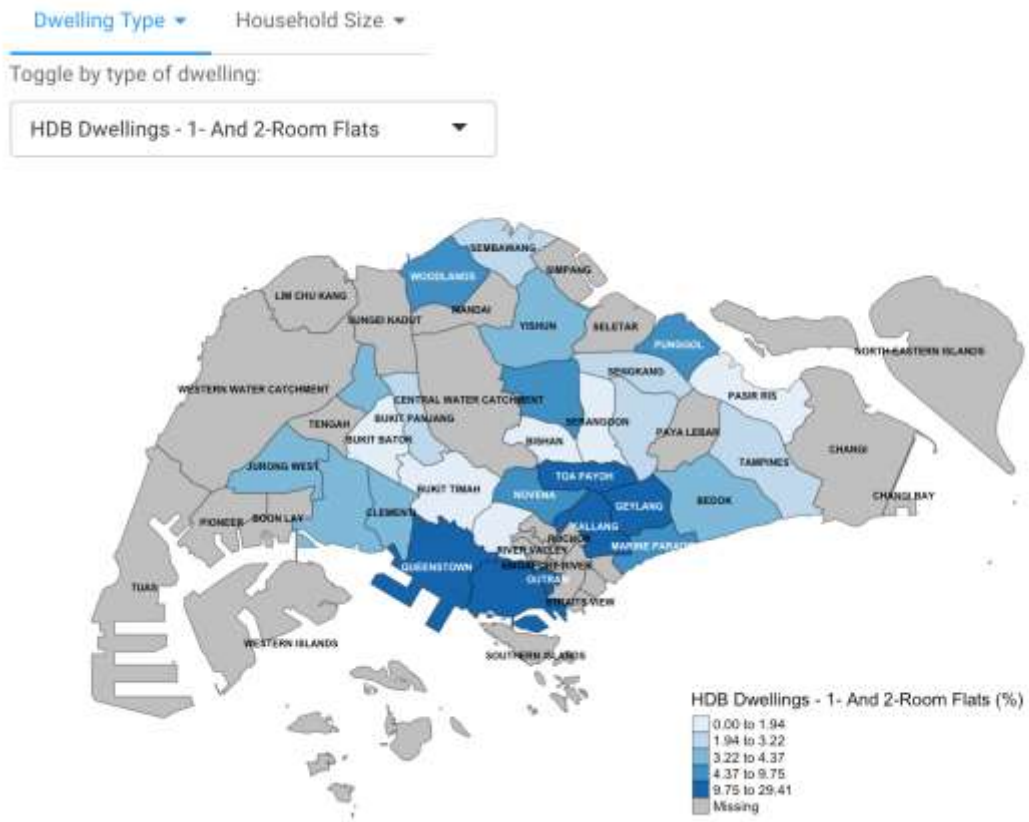
Under this distribution dashboard you will see the standard two things. On the right a piece about the current housing situation in Singapore and on the right two sections:

Dwelling Type



Under the dwelling type drop down button you will find the following options:

Dwelling Distribution:



This is a colorpeth map chart showing the percentage of people living in the type of dwelling per planning area. The type of dwelling must be chosen by you in the filter on the top right.

Breakdown

Dwelling Type ▾ Household Size ▾

Type of dwelling by Planning Areas (2015)



Here you will find a pie charts of each planning area and the percentage of each type of dwelling in them.

Data table

All the data used in creating the chart is available for you to look or search through.

Dwelling Type ▾ Household Size ▾

Show 10 entries Search:

	Type of Dwelling	Planning Area	Number of people(1000)	Category
1	HDB Dwellings - 1- And 2-Room Flats	Ang Mo Kio	5.6	HDB
2	HDB Dwellings - 1- And 2-Room Flats	Bedok	4	HDB
3	HDB Dwellings - 1- And 2-Room Flats	Bishan	0.5	HDB
4	HDB Dwellings - 1- And 2-Room Flats	Bukit Batok	0.7	HDB
5	HDB Dwellings - 1- And 2-Room Flats	Bukit Merah	12	HDB
6	HDB Dwellings - 1- And 2-Room Flats	Bukit Panjang	0.9	HDB
7	HDB Dwellings - 1- And 2-Room Flats	Bukit Timah	0	HDB
8	HDB Dwellings - 1- And 2-Room Flats	Choa Chu Kang	1.6	HDB
9	HDB Dwellings - 1- And 2-Room Flats	Clementi	1.2	HDB
10	HDB Dwellings - 1- And 2-Room Flats	Geylang	4.5	HDB

Showing 1 to 10 of 203 entries Previous 1 2 3 4 5 ... 21 Next

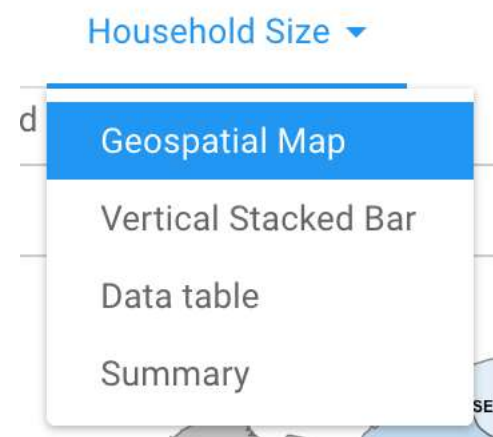
Summary

A simple data summary of the all the factors used in the visualisations. Includes category data and quartile data.

Dwelling Type ▾ Household Size ▾

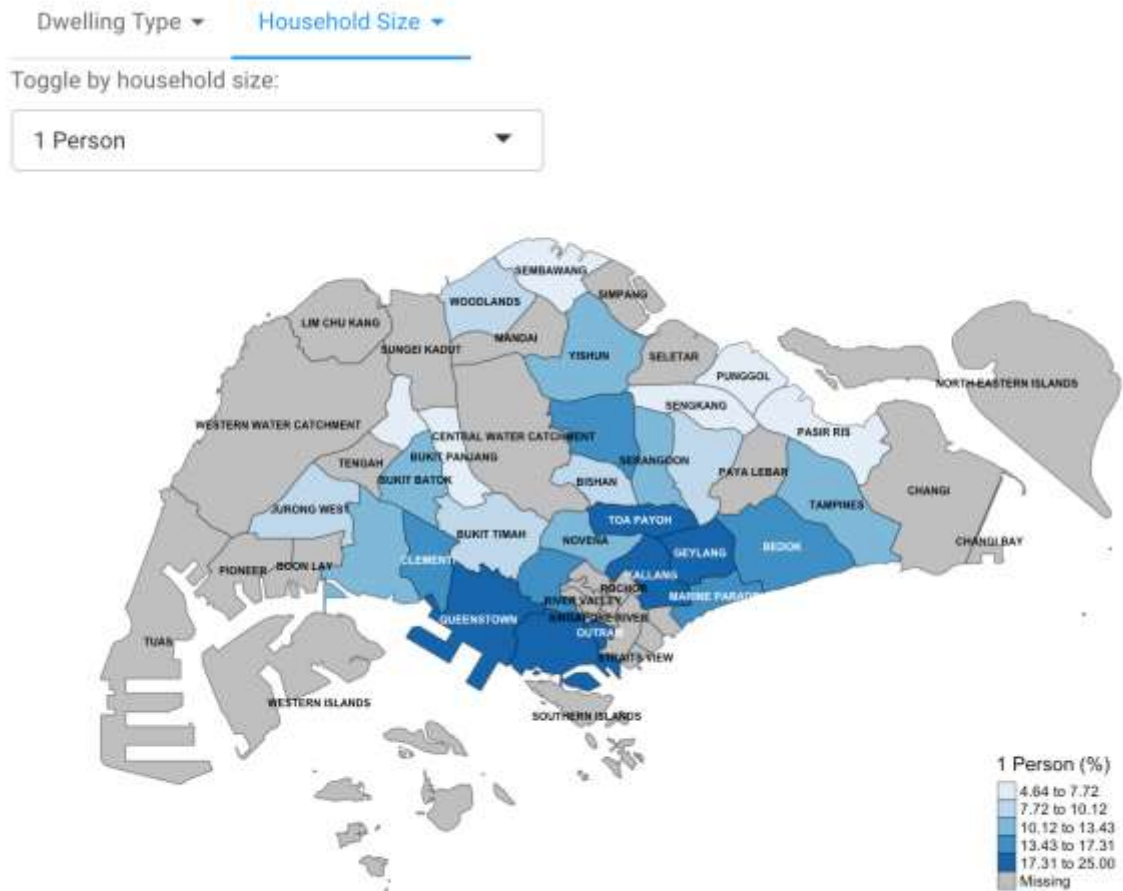
Type of Dwelling	Planning Area	Number of people(1000)	Category
Length:203	Length:203	Min. : 0.000	Length:203
Class :character	Class :character	1st Qu.: 0.700	Class :character
Mode :character	Mode :character	Median : 3.000	Mode :character
		Mean : 6.032	
		3rd Qu.: 9.050	
		Max. :31.100	

Household Size



In the household Size section, you will find the following:

Geospatial Map



A choropleth map chart showing the percentage number of people per household per planning area. The number of people per household must be chosen by you in the filter on the top right.

Vertical Stacked Bars



On the section you will find a stacked bar chart that shows the breakdown of number of people living in each household in each planning area.

Data table

All the data used in creating the chart is available for you to look or search through.

Dwelling Type ▾ Household Size ▾

Show 10 ▾ entries Search:

	Household Size	Planning Area	Number of people(1000)
1	1 Person	Ang Mo Kio	10.4
2	1 Person	Bedok	12.6
3	1 Person	Bishan	2.7
4	1 Person	Bukit Batok	5.2
5	1 Person	Bukit Merah	11.1
6	1 Person	Bukit Panjang	3
7	1 Person	Bukit Timah	2.4
8	1 Person	Choa Chu Kang	2.8
9	1 Person	Clementi	5.2
10	1 Person	Geylang	6.5

Showing 1 to 10 of 174 entries

Previous **1** 2 3 4 5 ... 18 Next

Summary

A simple data summary of the all the factors used in the visualisations. Includes category data and quartile data.

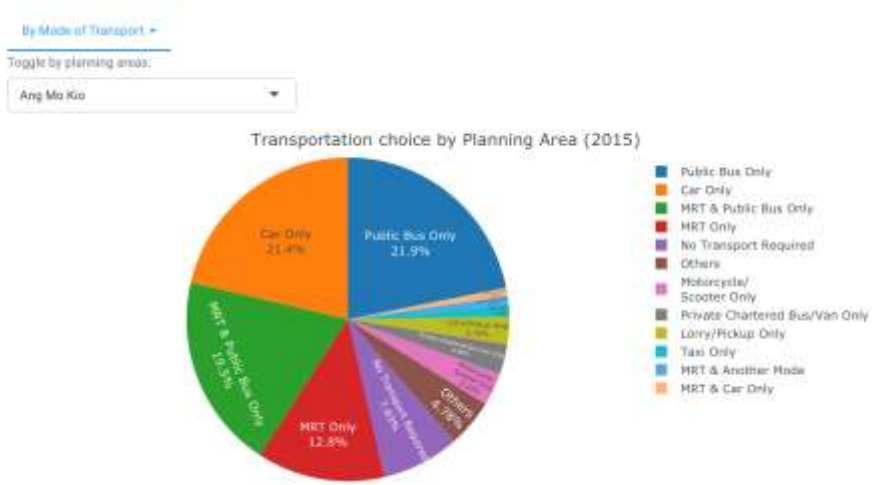
Dwelling Type ▾ Household Size ▾

Household Size	Planning Area	Number of people(1000)
Length:174	Length:174	Min. : 0.300
Class :character	Class :character	1st Qu.: 3.100
Mode :character	Mode :character	Median : 6.250
		Mean : 7.044
		3rd Qu.: 9.375
		Max. :23.000

Transport Trends

Public transport as a choice mode
 The Ministry of Transport emphasises a people-oriented land transport system and adopts a 3-pronged approach: inclusivity, density and vibrancy. As an ever-growing urban city, Singapore faces surging transport demand and constraints of physical space. To curb this, the government made cars less affordable by introducing costly additions such as the COE amongst daily charges like ERP charges and petrol.

The easy access to public transport suggest that choice mode should be unrelated to the wealth of an individual. However, we noticed that the more affluent areas still have a significantly higher population travelling by private transport, which goes to support the theory that people who travel by private transport are generally wealthier.

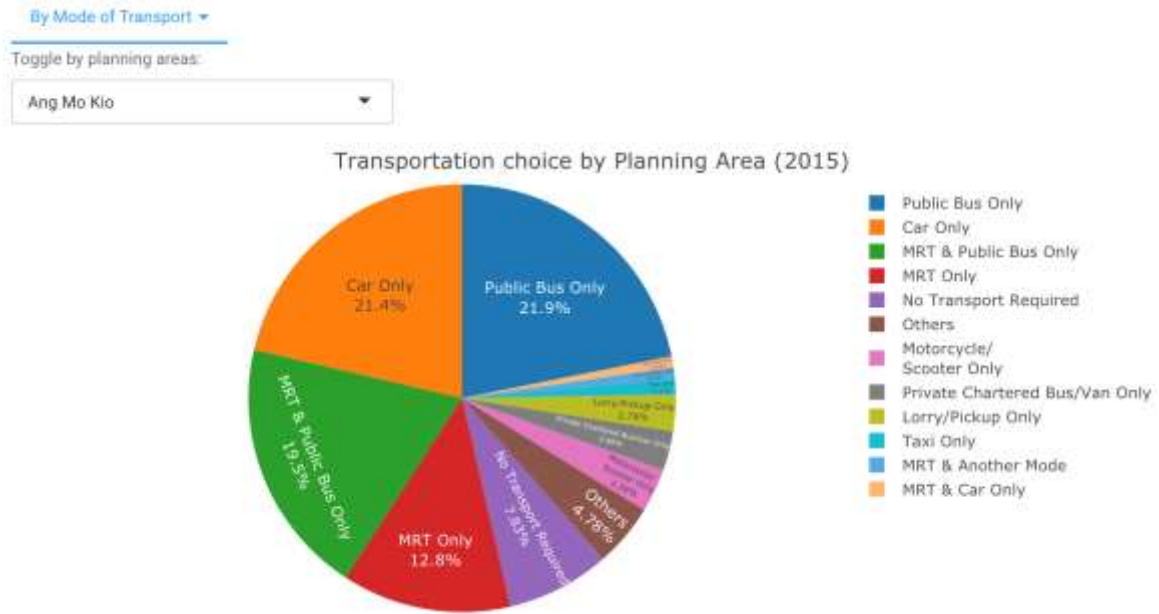


On the Transport Trends page, you will find on the right a summary of the transport system in Singapore and on the right a dropdown button with the following options:

By Mode of Transport ▾

- Pie chart
- Data table
- Summary

Pie chart



This pie chart visualises the percentage breakdown of the population in the planning area per mode of transport. The planning area can be filtered on the top right of the chart.

Data table

All the data used in creating the chart is available for you to look or search through.

By Mode of Transport ▾

Show 10 entries Search:

	Planning Area	Public Bus Only	MRT Only	MRT & Public Bus Only	MRT & Car Only	MRT & Another Mode	Taxi Only	Car Only	Private Chartered Bus/Van Only	Lorry/Pickup Only	Motorcycle/Scooter Only
1	Ang Mo Kio	19707	11538	17565	738	787	1057	19258	2683	2491	2965
2	Bedok	31472	11280	25128	1052	916	2473	40895	3879	2632	5954
3	Bishan	7773	5957	8809	506	432	764	14199	927	682	852
4	Bukit Batok	11769	10030	13219	658	1448	733	19547	3517	1926	2783
5	Bukit Merah	24356	7308	12900	293	638	1344	14187	1590	1116	2537
6	Bukit Panjang	16635	6	5241	168	2979	653	18733	3089	2065	2753
7	Bukit Timah	3940	0	2661	637	95	830	19803	279	193	139
8	Changi	102	20	116	6	0	6	195	35	0	106
9	Choa Chu Kang	8736	13791	18136	772	2195	583	21147	5088	2229	3734
10	Clementi	11169	4597	7409	347	478	651	11551	1499	834	1304

Showing 1 to 10 of 36 entries Previous **1** 2 3 4 Next

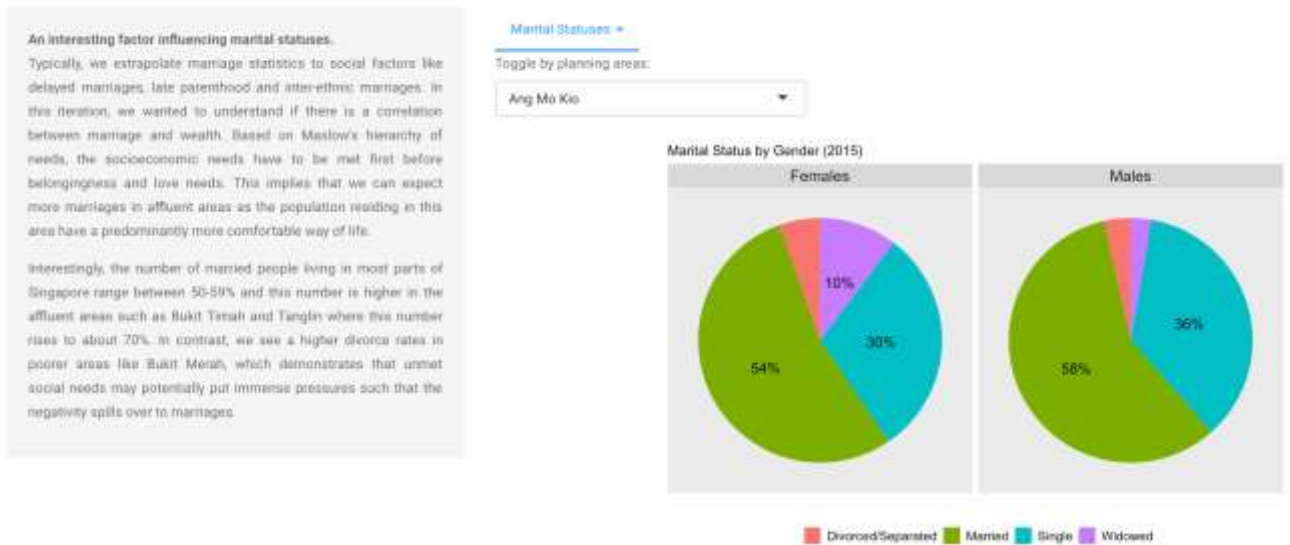
Summary

A simple data summary of the all the factors used in the visualisations. Includes category data and quartile data.

By Mode of Transport ▾

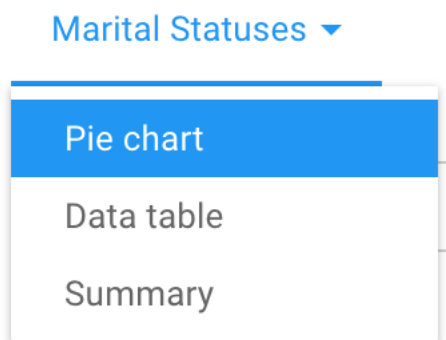
Planning Area	Public Bus Only	MRT Only	MRT & Public Bus Only	MRT & Car Only	MRT & Another Mode	Taxi Only
Length:36	Min. : 62	Min. : 0.0	Min. : 54	Min. : 6.0	Min. : 0.00	Min. :
Class :character	1st Qu.: 1945	1st Qu.: 244.2	1st Qu.: 1275	1st Qu.: 79.5	1st Qu.: 87.75	1st Qu.: 21
Mode :character	Median :10368	Median : 5545.5	Median : 7686	Median : 339.0	Median : 481.00	Median : 66
	Mean :10037	Mean : 5995.5	Mean : 9155	Mean : 393.3	Mean : 712.92	Mean : 69
	3rd Qu.:14520	3rd Qu.: 9922.8	3rd Qu.:13023	3rd Qu.: 655.0	3rd Qu.: 975.50	3rd Qu.: 83
	Max. :31472	Max. :19438.0	Max. :26657	Max. :1052.0	Max. :13058.00	Max. :241
Lorry/Pickup Only	Motorcycle/\r\nScooter Only	Others	No Transport Required			
Min. : 0	Min. : 7	Min. : 41.0	Min. : 25			
1st Qu.: 138	1st Qu.: 154	1st Qu.: 433.8	1st Qu.: 1644			
Median : 888	Median :1462	Median :2758.0	Median : 3584			
Mean :1175	Mean :2004	Mean :3235.7	Mean : 3896			
3rd Qu.:1961	3rd Qu.:2834	3rd Qu.:4523.5	3rd Qu.: 5859			
Max. :4562	Max. :6716	Max. :9398.0	Max. :10986			

Relationship Statistics



This is the last dashboard of the application. You will find the final exposition on the marriage statistics in Singapore and its significance. On the right side you will find the last data visualisation in our application.

If you click on the Marital Statuses dropdown button you will find the following options:



Pie Chart



This chart shows within each gender, what is the percentage breakdown of their marital status per planning area. You can filter the planning area using the filter on the top right of the pie chart.

Data table

All the data used in creating the chart is available for you to look or search through.

Marital Statuses ▾

Show 10+ entries Search:

	Marital status	Gender	Planning Area	Number of people(1000)
1	Single	Males	Ang Mo Kio	27.2
2	Single	Males	Bedok	40.2
3	Single	Males	Bishan	12.3
4	Single	Males	Bukit Batok	20.8
5	Single	Males	Bukit Merah	22.6
6	Single	Males	Bukit Panjang	19.7
7	Single	Males	Bukit Timah	7.2
8	Single	Males	Choa Chu Kang	24.4
9	Single	Males	Clementi	10.4
10	Single	Males	Geylang	15.9

Showing 1 to 10 of 232 entries Previous **1** 2 3 4 5 ... 24 Next

Summary

A simple data summary of the all the factors used in the visualisations. Includes category data and quartile data

Marital Statuses -

Marital status	Gender	Planning Area	Number of people(1000)
Length:232	Length:232	Length:232	Min. : 0.10
Class :character	Class :character	Class :character	1st Qu.: 1.70
Mode :character	Mode :character	Mode :character	Median : 5.60
			Mean :14.12
			3rd Qu.:21.90
			Max. :73.60