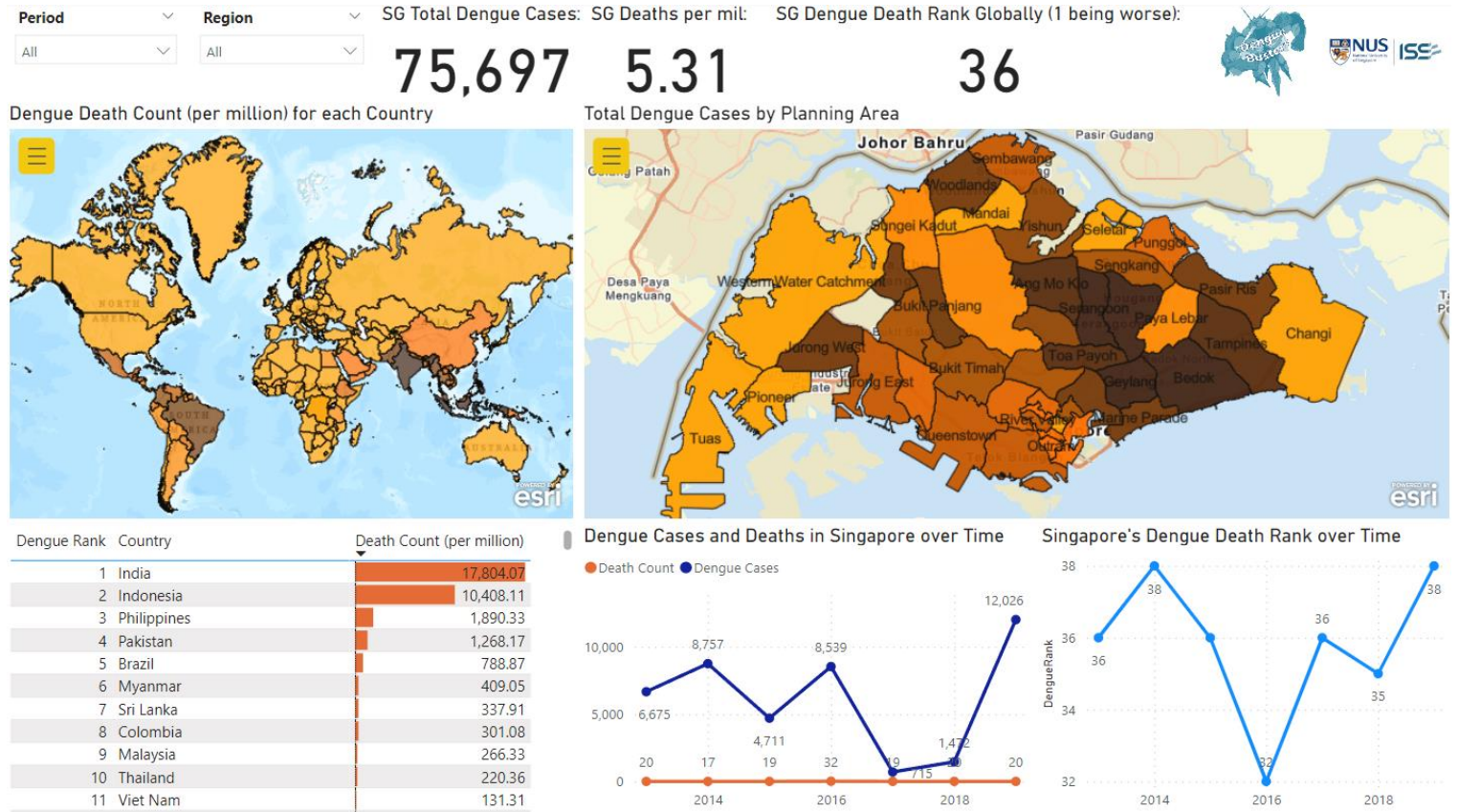


Screenshots of Dengue Project

Dengue Prevalence (2013-2020).pbix

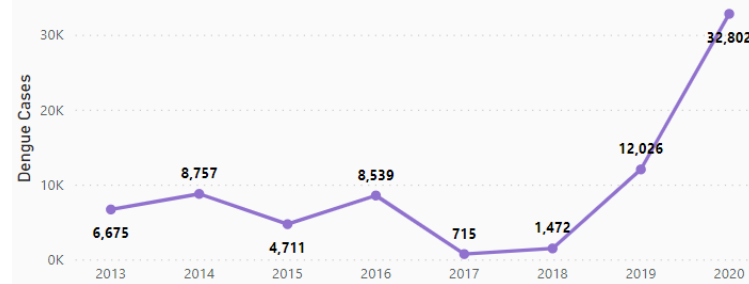
Incidence & Fatality



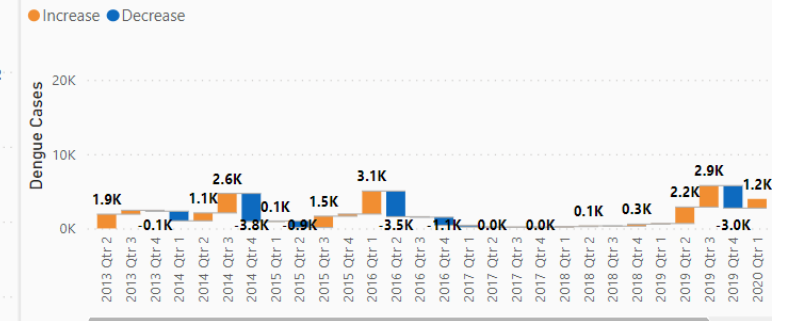
General Trends

Period: All Region: All Total Dengue Cases: **75,697**

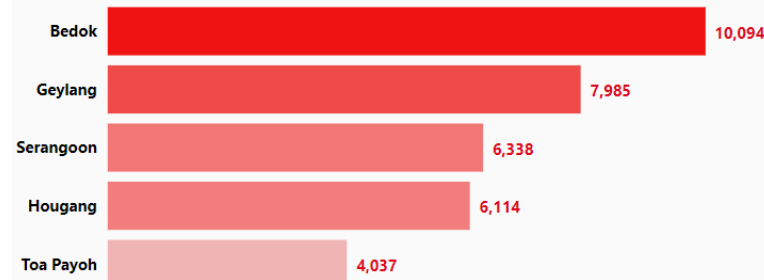
Sudden Spike in Dengue Cases in Singapore since COVID-19
Spikes in 2019 & 2020 Q3



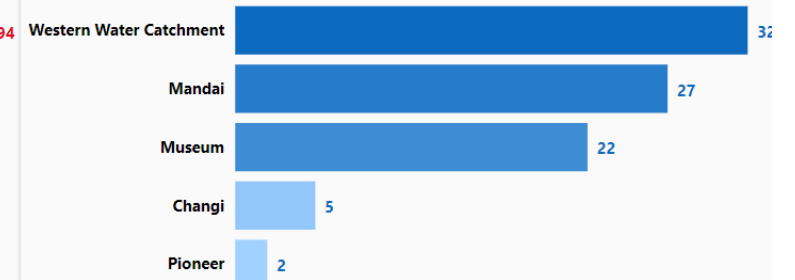
Most of the Q3 hit HIGHEST Dengue Cases



Top 5 Dengue Hotspots



Bottom 5 Dengue Hotspots



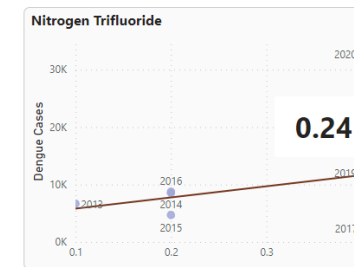
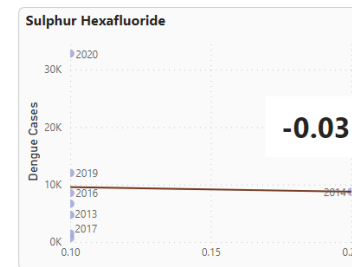
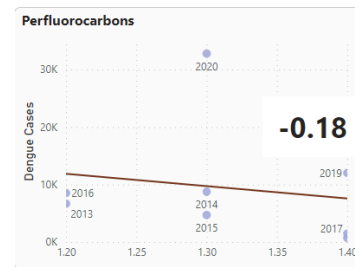
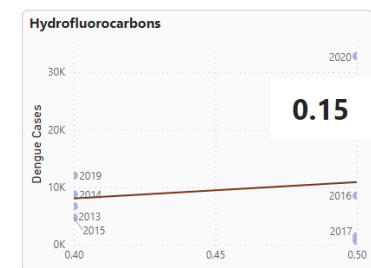
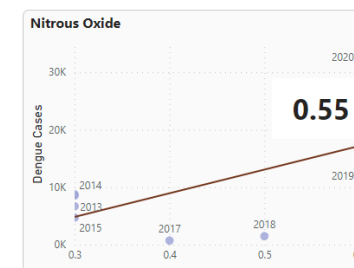
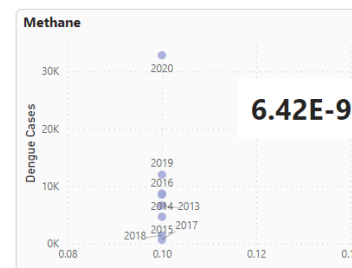
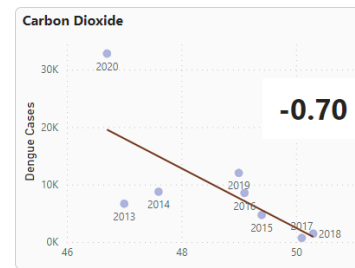
Scatterplots with Weather



Scatterplots with Gases

Period
All

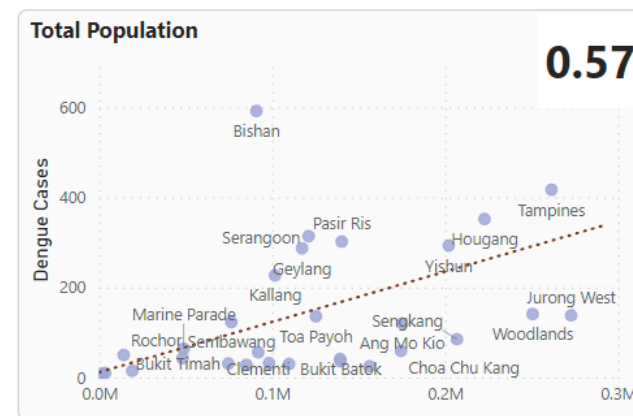
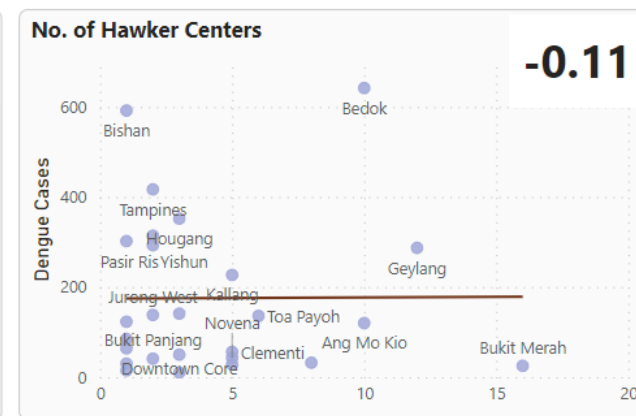
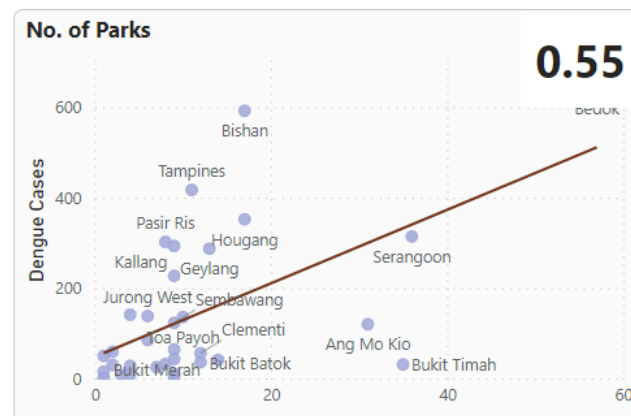
Correlation Coefficient Between Total Dengue Cases and Greenhouse Gases (Total Mega Tons)



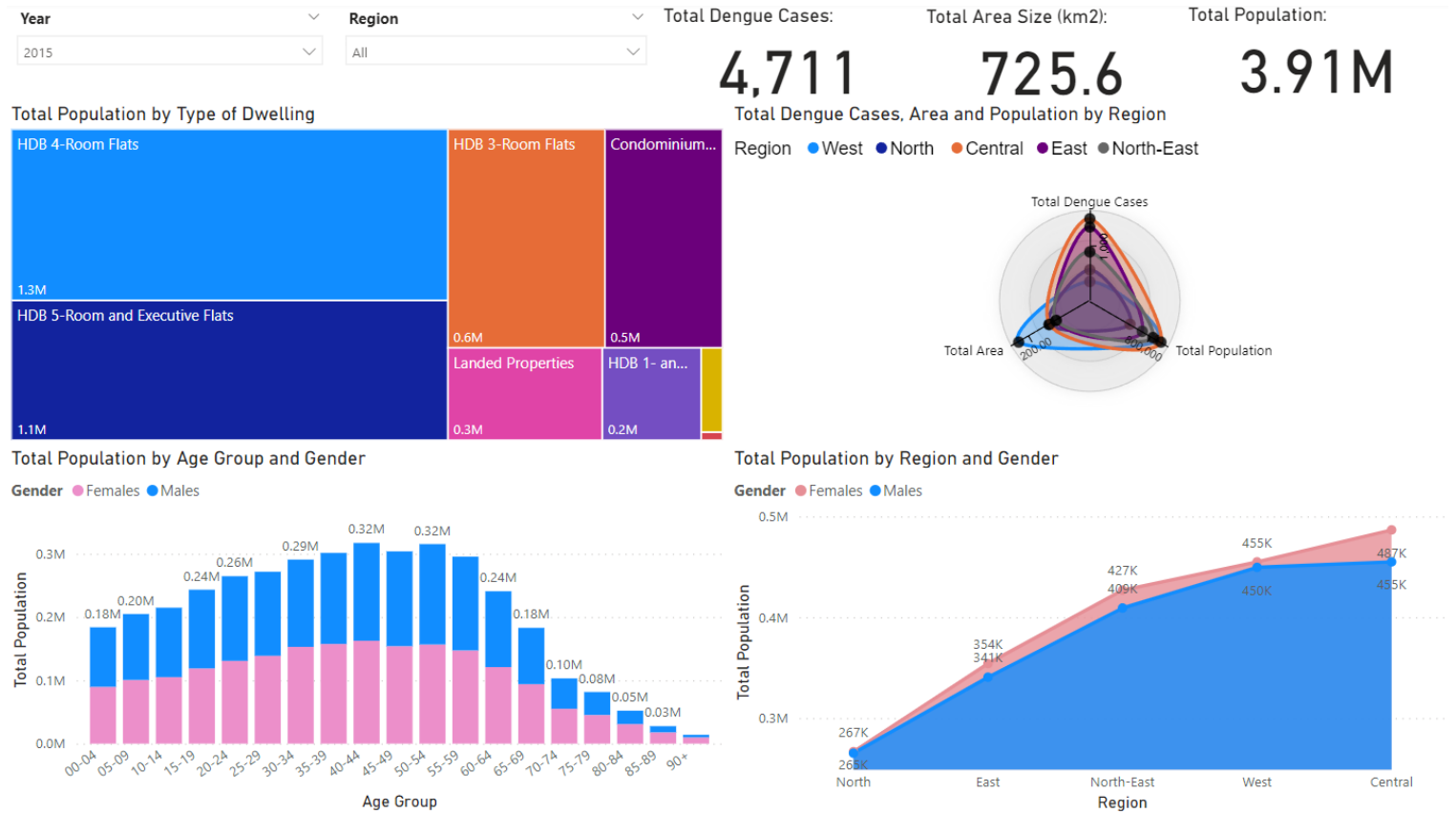
Scatterplots with Amenities & Population

Year: 2015
 Region: All

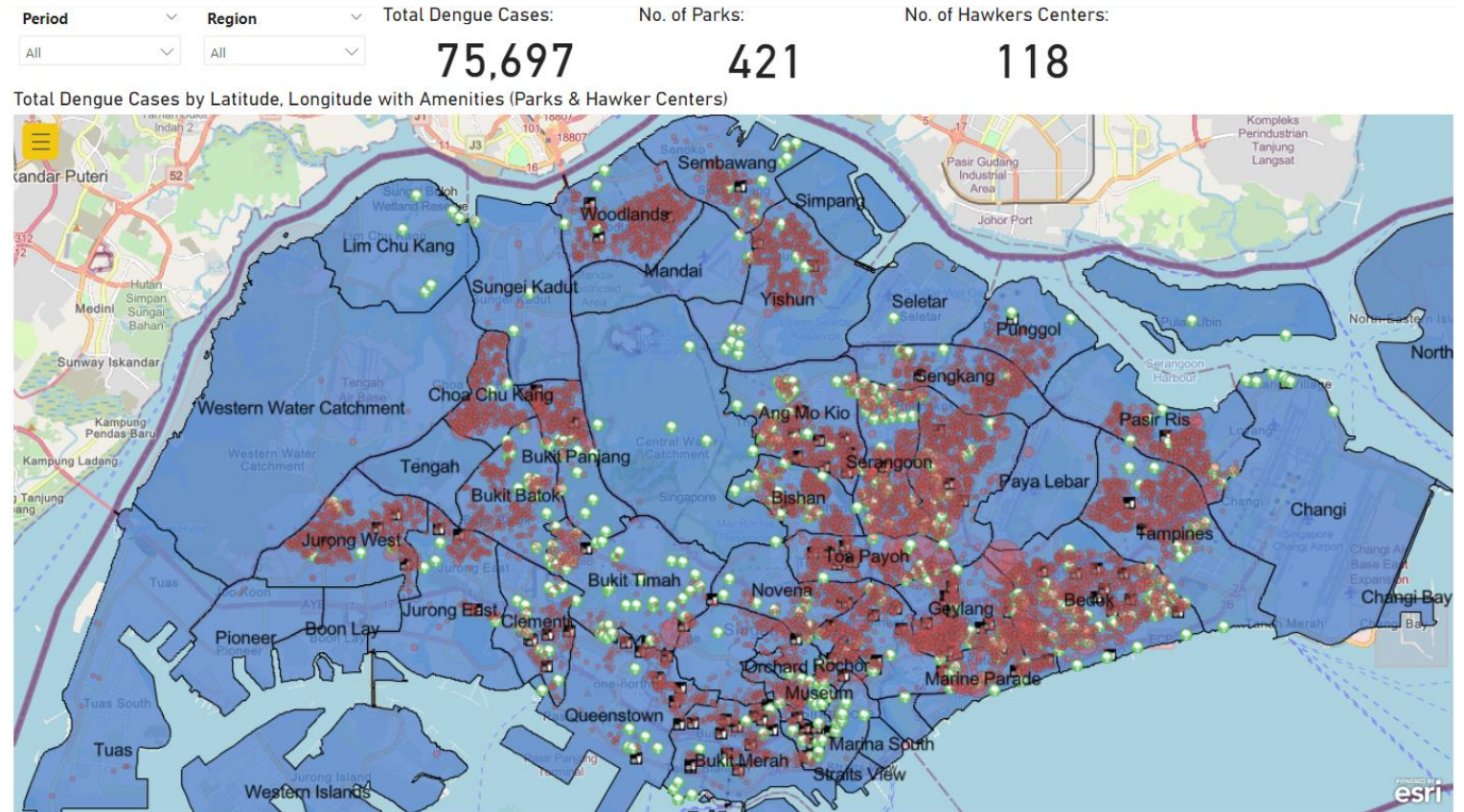
Correlation Coefficient Between Total Dengue Cases with No. of Amenities / Total Population



Population Demographics



Dengue Cases with Amenities



K-Means Clustering

Region K-Means Cluster

No. of Parks (with Population Density)

K-Means Clusters ● 1 ● 2 ● 3 ● 4 ● 5



No. of Hawker Centers (with Population Density)

K-Means Clusters ● 1 ● 2 ● 3 ● 4 ● 5



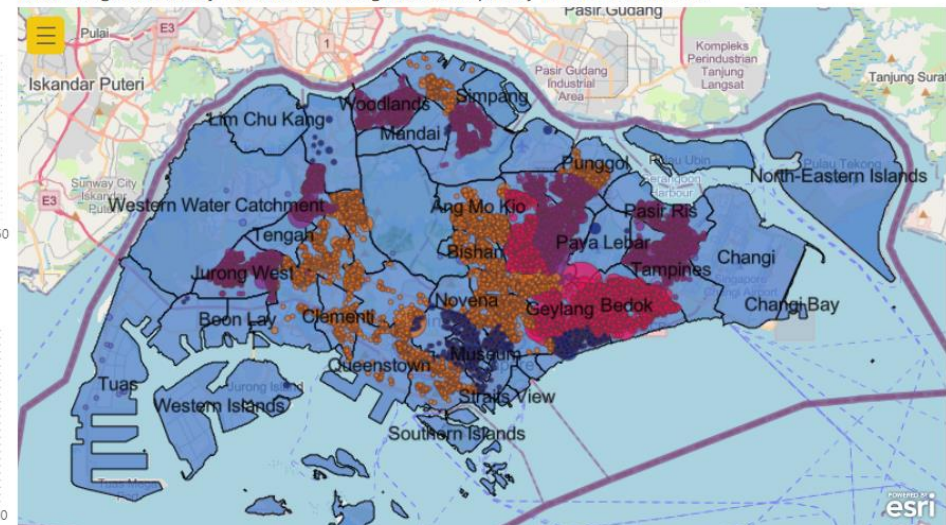
Results derived outside of Power BI:

	Key description
Cluster 1: big area, low amenities, low population, low dengue counts	Vast non-populated space
Cluster 2: low area, low amenities, low population, low dengue counts	Small non-populated space
Cluster 3: moderate area, moderate amenities, moderate population, low dengue counts	Low population density with some amenities
Cluster 4: moderate area, moderate amenities, high population, moderate dengue counts	High population density with some amenities
Cluster 5: moderate area, high amenities, high population, high dengue counts	High population density with many amenities

Total Dengue Cases:

75,697

Total Dengue Cases by Latitude and Longitude (Grouped by K-Means Clusters)



K-Means Clusters	Planning Area Size (km2)	No. of Parks	No. of Hawker Centers	Median Population	Median Dengue Cases
1	44.03	3	0	592	4
2	6.22	2	1	5,941	17
3	12.09	13	5	109,773	103
4	14.51	8	2	220,578	272
5	13.81	35	8	173,852	631
Mean	13.15	8	2	76,089	113

Dengue Cases across Singapore

6/10/2020

6/11/2020

Region

Central

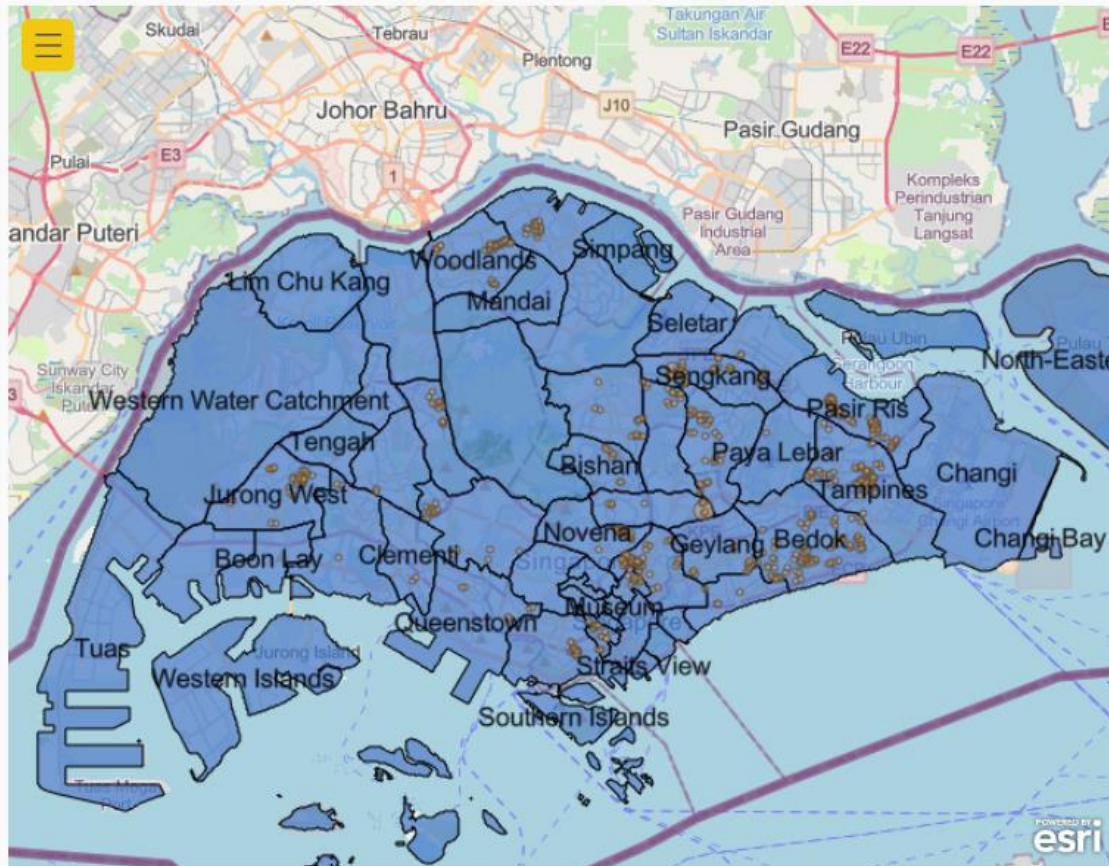
East

North

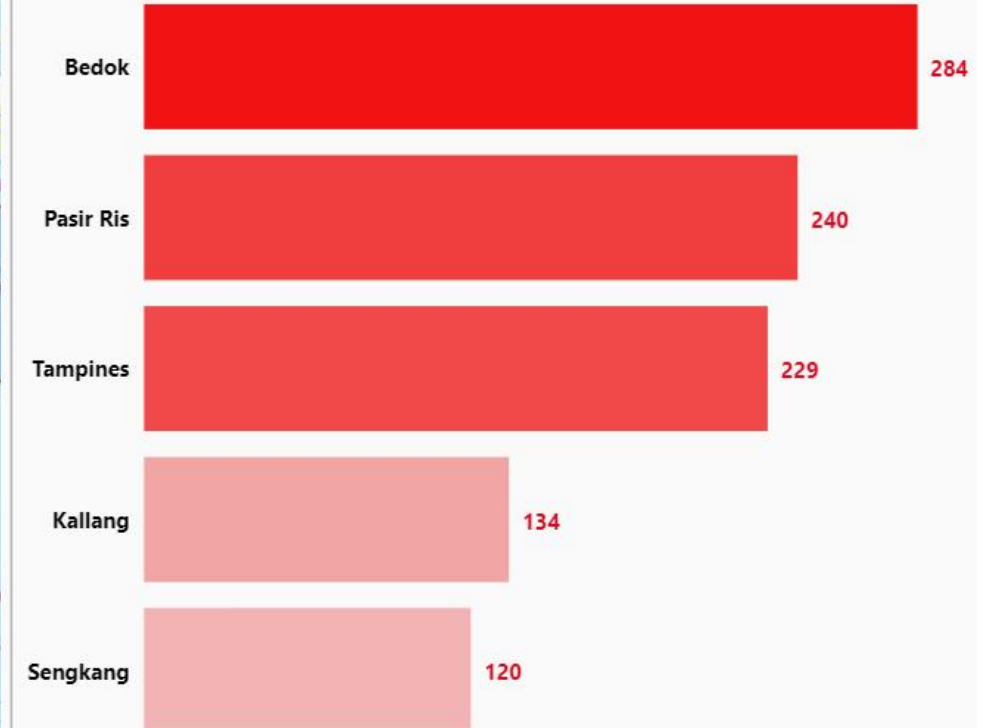
North-East

West

Total Dengue Cases by Latitude and Longitude



Top 5 Dengue Hotspots



Prevent Aedes Mosquito



Dengue Monitoring Dashboard

Period

All

Region

All

Total Dengue Cases:

75,697

Total No. of Clusters:

10,849



7,605

Clusters with 0 new cases

5,705

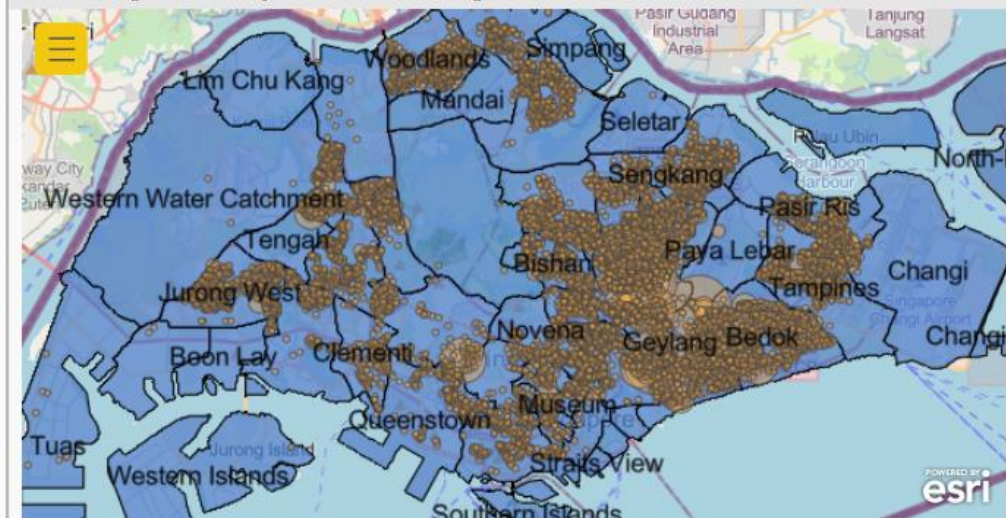
Clusters with 1 to 9 cases

7,787

Clusters with 10 or more cases

Planning Area	Address	Date	Total Dengue Cases	Total Cluster Cases
Bukit Timah	Leedon Heights	3/6/2014	136	7
Bedok	Kaki Bukit Industrial Terrace	18/9/2020	104	0
Bedok	Kaki Bukit Industrial Terrace	7/8/2020	99	104
Choa Chu Kang	Choa Chu Kang Avenue 5	21/7/2014	88	264
Pasir Ris	Flora Drive (Near Tpe)	3/6/2014	88	56
Toa Payoh	Shaw Road	6/11/2020	85	1
Toa Payoh	Youngberg Terrace (Avon Park)	3/7/2020	84	0
Tampines	Tampines Avenue 4	4/1/2016	81	14
Choa Chu Kang	Choa Chu Kang Avenue 5	14/7/2014	74	280
Bukit Panjang	Chestnut Avenue	22/9/2014	70	29
Hougang	Kovan Road	14/7/2014	66	180
Bedok	Jalan Sempadan (Villa Marina)	18/9/2020	65	5
Bedok	Kaki Bukit Industrial Terrace	3/7/2020	63	203
Bukit Timah	Leedon Heights	2/5/2014	63	173
Hougang	Kovan Road	1/7/2014	61	185
Toa Payoh	Bidadari Park Drive	3/7/2020	60	11

Total Dengue Cases by Latitude and Longitude



Dengue Cases



Total Dengue Cases

0 136

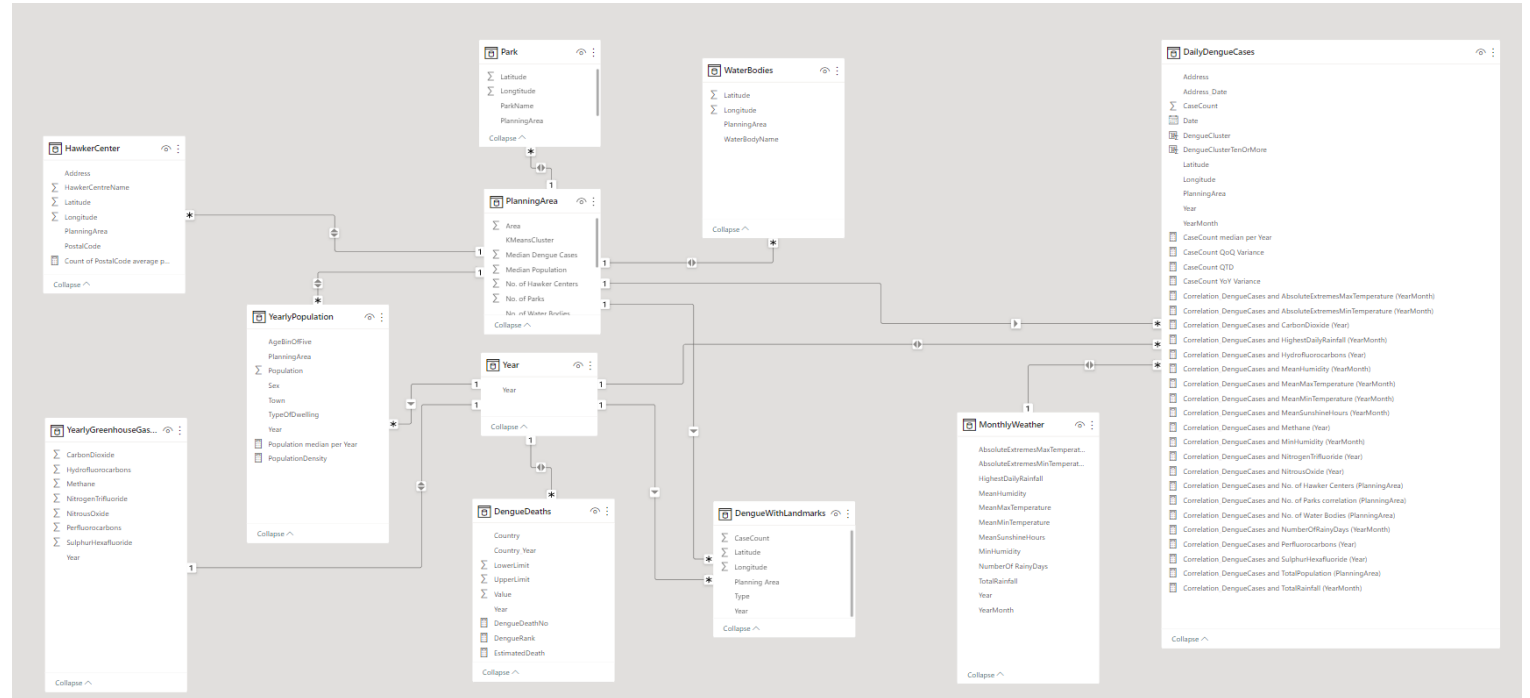


Total Cluster Cases

0 816



Data Model (Schema)



Sample Data (DailyDengueCases)

Address	Latitude	Longitude	Date	CaseCount	PlanningArea	YearMonth	Year	DengueCluster	DengueClusterTenOrMore	Address_Date
Bedok Central (Block 219D)	1.325042	103.93379	16/8/2019	0	Bedok	2019_Aug	2019	0	0	Bedok Central (Block 219D)_16/8/2019
Bedok Central (Block 220C)	1.325537	103.933879	16/8/2019	0	Bedok	2019_Aug	2019	0	0	Bedok Central (Block 220C)_16/8/2019
Bedok North Avenue 1 (Block 423)	1.328045	103.927549	16/8/2019	0	Bedok	2019_Aug	2019	0	0	Bedok North Avenue 1 (Block 423)_16/8/2019
Bedok North Avenue 3 (Block 401)	1.331021	103.933518	16/8/2019	0	Bedok	2019_Aug	2019	0	0	Bedok North Avenue 3 (Block 401)_16/8/2019
Bedok North Avenue 3 (Block 403)	1.329829	103.933835	16/8/2019	0	Bedok	2019_Aug	2019	0	0	Bedok North Avenue 3 (Block 403)_16/8/2019
Bedok North Avenue 4 (Block 96)	1.3334358	103.9406193	16/8/2019	0	Bedok	2019_Aug	2019	0	0	Bedok North Avenue 4 (Block 96)_16/8/2019
Bedok North Road (Block 421)	1.3282862	103.9289357	16/8/2019	0	Bedok	2019_Aug	2019	0	0	Bedok North Road (Block 421)_16/8/2019
Bedok North Road (Block 77)	1.328635	103.94152	16/8/2019	0	Bedok	2019_Aug	2019	0	0	Bedok North Road (Block 77)_16/8/2019
Bedok North Street 1 (Block 201)	1.326129	103.928216	16/8/2019	0	Bedok	2019_Aug	2019	0	0	Bedok North Street 1 (Block 201)_16/8/2019
Bedok North Street 1 (Block 205)	1.32615	103.931213	16/8/2019	0	Bedok	2019_Aug	2019	0	0	Bedok North Street 1 (Block 205)_16/8/2019
Bedok North Street 1 (Block 419)	1.3271794	103.9277677	16/8/2019	0	Bedok	2019_Aug	2019	0	0	Bedok North Street 1 (Block 419)_16/8/2019
Bedok North Street 4 (Block 84)	1.331865	103.939614	16/8/2019	0	Bedok	2019_Aug	2019	0	0	Bedok North Street 4 (Block 84)_16/8/2019
Bedok Reservoir View (Block 763)	1.33608	103.934857	16/8/2019	0	Bedok	2019_Aug	2019	0	0	Bedok Reservoir View (Block 763)_16/8/2019
Bedok Reservoir View (Block 766)	1.33619	103.936148	16/8/2019	0	Bedok	2019_Aug	2019	0	0	Bedok Reservoir View (Block 766)_16/8/2019
Bedok Reservoir View (Block 773)	1.336301	103.937287	16/8/2019	0	Bedok	2019_Aug	2019	0	0	Bedok Reservoir View (Block 773)_16/8/2019
Bedok Road	1.3265276	103.9512545	16/8/2019	0	Bedok	2019_Aug	2019	0	0	Bedok Road_16/8/2019
Bedok South Avenue 2 (Block 35)	1.322376	103.939523	16/8/2019	0	Bedok	2019_Aug	2019	0	0	Bedok South Avenue 2 (Block 35)_16/8/2019
Bedok South Avenue 3 (Block 167)	1.3195977	103.9449967	16/8/2019	0	Bedok	2019_Aug	2019	0	0	Bedok South Avenue 3 (Block 167)_16/8/2019
Bedok South Road (Block 162)	1.319664	103.946081	16/8/2019	0	Bedok	2019_Aug	2019	0	0	Bedok South Road (Block 162)_16/8/2019
Bedok South Road (Block 163)	1.3197752	103.9466099	16/8/2019	0	Bedok	2019_Aug	2019	0	0	Bedok South Road (Block 163)_16/8/2019
Bedok South Road (Block 164)	1.3200909	103.946567	16/8/2019	0	Bedok	2019_Aug	2019	0	0	Bedok South Road (Block 164)_16/8/2019
Bedok South Road (Block 171)	1.320964	103.945474	16/8/2019	0	Bedok	2019_Aug	2019	0	0	Bedok South Road (Block 171)_16/8/2019
Chai Chee Avenue (Block 29)	1.324834	103.924372	16/8/2019	0	Bedok	2019_Aug	2019	0	0	Chai Chee Avenue (Block 29)_16/8/2019
Chai Chee Avenue (Block 29A)	1.324592	103.924035	16/8/2019	0	Bedok	2019_Aug	2019	0	0	Chai Chee Avenue (Block 29A)_16/8/2019
Chai Chee Avenue (Block 30)	1.324727	103.924682	16/8/2019	0	Bedok	2019_Aug	2019	0	0	Chai Chee Avenue (Block 30)_16/8/2019
Chai Chee Avenue (Block 32)	1.323866	103.924796	16/8/2019	0	Bedok	2019_Aug	2019	0	0	Chai Chee Avenue (Block 32)_16/8/2019
Chai Chee Drive (Block 55)	1.3265769	103.919335	16/8/2019	0	Bedok	2019_Aug	2019	0	0	Chai Chee Drive (Block 55)_16/8/2019
Chai Chee Drive (Block 56)	1.3263647	103.9199809	16/8/2019	0	Bedok	2019_Aug	2019	0	0	Chai Chee Drive (Block 56)_16/8/2019

Sample Data (DengueDeaths)

Country	Year	Value	UpperLimit	LowerLimit	Country_Year
Sweden	2013	0	0	0	Sweden_2013
Bulgaria	2013	0	0	0	Bulgaria_2013
Republic of Moldova	2013	0	0	0	Republic of Moldova_2013
Cyprus	2013	0	0	0	Cyprus_2013
Ukraine	2013	0	0	0	Ukraine_2013
San Marino	2013	0	0	0	San Marino_2013
Iran (Islamic Republic of)	2013	0	0	0	Iran (Islamic Republic of)_2013
Finland	2013	0	0	0	Finland_2013
Hungary	2013	0	0	0	Hungary_2013
United Arab Emirates	2013	0	0	0	United Arab Emirates_2013
Iceland	2013	0	0	0	Iceland_2013
Russian Federation	2013	0	0	0	Russian Federation_2013
Denmark	2013	0	0	0	Denmark_2013
United Kingdom	2013	0	0	0	United Kingdom_2013
Czechia	2013	0	0	0	Czechia_2013
Croatia	2013	0	0	0	Croatia_2013
Switzerland	2013	0	0	0	Switzerland_2013
Georgia	2013	0	0	0	Georgia_2013
Poland	2013	0	0	0	Poland_2013
Iraq	2013	0	0	0	Iraq_2013
Armenia	2013	0	0	0	Armenia_2013
Botswana	2013	0	0	0	Botswana_2013
Germany	2013	0	0	0	Germany_2013
North Macedonia	2013	0	0	0	North Macedonia_2013
Japan	2013	0	0	0	Japan_2013
Morocco	2013	0	0	0	Morocco_2013
Ireland	2013	0	0	0	Ireland_2013
Kazakhstan	2013	0	0	0	Kazakhstan_2013
Azerbaijan	2013	0	0	0	Azerbaijan_2013
Montenegro	2013	0	0	0	Montenegro_2013
Slovakia	2013	0	0	0	Slovakia_2013

Sample Data
(DengueWithLandmarks)

Latitude ▾	Longitude ▾	CaseCount ▾	Type ▾	Year ▾	Planning Area ▾
1.3364609	103.8897913	1	Dengue Cases	2020	Hougang
1.3376999	103.890659	1	Dengue Cases	2020	Hougang
1.3376999	103.890659	1	Dengue Cases	2020	Hougang
1.3433729	103.8827464	1	Dengue Cases	2020	Hougang
1.3433729	103.8827464	1	Dengue Cases	2020	Hougang
1.346903	103.881367	1	Dengue Cases	2020	Hougang
1.347344	103.882443	1	Dengue Cases	2020	Hougang
1.3475706	103.885553	1	Dengue Cases	2020	Hougang
1.34908	103.886687	1	Dengue Cases	2020	Hougang
1.34908	103.886687	1	Dengue Cases	2020	Hougang
1.3491824	103.8884665	1	Dengue Cases	2020	Hougang
1.3491824	103.8884665	1	Dengue Cases	2020	Hougang
1.349196	103.888434	1	Dengue Cases	2020	Hougang
1.349196	103.888434	1	Dengue Cases	2020	Hougang
1.3497348	103.8889379	1	Dengue Cases	2020	Hougang
1.3497348	103.8889379	1	Dengue Cases	2020	Hougang
1.3501122	103.8889381	1	Dengue Cases	2020	Hougang
1.3501122	103.8889381	1	Dengue Cases	2020	Hougang
1.3503172	103.8839564	1	Dengue Cases	2020	Hougang
1.350451	103.8878665	1	Dengue Cases	2020	Hougang
1.350451	103.8878665	1	Dengue Cases	2020	Hougang
1.350451	103.8878665	1	Dengue Cases	2020	Hougang
1.350522	103.887311	1	Dengue Cases	2020	Hougang
1.350522	103.887311	1	Dengue Cases	2020	Hougang
1.350905	103.886555	1	Dengue Cases	2020	Hougang
1.351103	103.889221	1	Dengue Cases	2020	Hougang
1.351103	103.889221	1	Dengue Cases	2020	Hougang
1.351301	103.886531	1	Dengue Cases	2020	Hougang
1.351301	103.886531	1	Dengue Cases	2020	Hougang
1.3514409	103.889365	1	Dengue Cases	2020	Hougang
1.3514409	103.889365	1	Dengue Cases	2020	Hougang
1.3514409	103.889365	1	Dengue Cases	2020	Hougang
1.351521	103.887057	1	Dengue Cases	2020	Hougang

Sample Data (HawkerCenter)

HawkerCentreName	Address	PostalCode	PlanningArea	Latitude	Longitude
1	2, Adam Road, S(289876)	289876	NOVENA	1.32415985259558	103.814165924136
2	National Development Building, Annex B, Telok Ayer Street, S(069111)	069111	DOWNTOWN CORE	1.2793398636571	103.846652482254
3	1, Bedok Road, S(469572)	469572	BEDOK	1.32034716834128	103.955480570427
4	38A, Beo Crescent, S(169982)	169982	BUKIT MERAH	1.28883089150258	103.827353892228
5	166, Jalan Besar, S(208877)	208877	ROCHOR	1.30734410918998	103.856888783497
6	51, Upper Bukit Timah Road, S(588215)	588215	BUKIT MERAH	1.33945242854685	103.776007306701
7	20, Kensington Park Road, S(557269)	557269	SERANGOON	1.36423252476886	103.86652701738
8	31, Commonwealth Crescent, S(149644)	149644	QUEENSTOWN	1.30707478767354	103.800432545798
9	271, Onan Road, S(424768)	424768	MARINE PARADE	1.30941788760759	103.901825408227
10	1220, East Coast Parkway, S(468960)	468960	BEDOK	1.30726106591172	103.934799737098
11	Geylang Serai, S(402001)	402001	GEYLANG	1.31667885583161	103.898102655979
12	505, Beach Road, S(199583)	199583	KALLANG	1.30314151533241	103.863877368653
13	1, Lorong Mambong, S(277700)	277700	QUEENSTOWN	1.31107297402127	103.794876419662
14	17, Old Airport Road, S(397972)	397972	GEYLANG	1.30734398370473	103.884017699319
15	38A, Margaret Drive, S(142038)	142038	QUEENSTOWN	1.29742585102203	103.804710471304
16	86, Market Street, CapitaSpring Building, S(048947)	048947	DOWNTOWN CORE	1.28390006495234	103.850005961205
17	4, Woodlands Street 12, S (738623)	738623	WOODLANDS	1.43354318137534	103.77988189197
18	1, Kadayanallur Street, S(069184)	069184	DOWNTOWN CORE	1.28053790831335	103.844474807265
19	500, Clemenceau Ave North, S(229495)	229495	NEWTON	1.31211427254136	103.839813174478
20	861, North Bridge Road, S(198783)	198783	KALLANG	1.30563433652207	103.863909336656
21	121, Pasir Panjang Road, S(118543)	118543	QUEENSTOWN	1.27591797439292	103.791410908656
22	590, Upper Thomson Road, S(574419)	574419	ANG MO KIO	1.37231949296183	103.829018145089
23	49A, Serangoon Garden Way, S(555945)	555945	SERANGOON	1.36273680777483	103.866162163042
24	3, Yung Sheng Road, S(618499)	618499	JURONG WEST	1.3347210661928	103.721583797451
25	48A, Tanglin Halt Road, S(148813)	148813	QUEENSTOWN	1.30054407507427	103.797737980247
26	30, Seng Poh Road, S(168898)	168898	BUKIT MERAH	1.28468599168094	103.832421566287
27	70, Zion Road, S(247792)	247792	TANGLIN	1.29231114800655	103.830973358549
28	Blk 6, Jalan Bukit Merah, S(150006)	150006	BUKIT MERAH	1.28674226360795	103.808284856741
29	Blk 270, Queen Street, S(180270)	180270	ROCHOR	1.30110201573423	103.854115779087
30	Blk 120, Bukit Merah Lane 1, S(150120)	150120	BUKIT MERAH	1.28630594274136	103.804492637648
31	Blk 117, Aljunied Ave 2, S(380117)	380117	GEYLANG	1.32064636781982	103.88702414
32	Blk 226D, Ang Mo Kio Ave 1, S(564226)	564226	ANG MO KIO	1.36680096218071	103.839152274224
33	Blk 341, Ang Mo Kio Ave 1, S(560341)	560341	ANG MO KIO	1.36410720984459	103.848242165861
34	Blks 160/162, Ang Mo Kio Ave 4, S(560160/560162)	560160/560162	ANG MO KIO	1.3741075702016	103.838863921122
35	Blk 628, Ang Mo Kio Ave 4, S(560628)	560628	ANG MO KIO	1.38098761665454	103.840628087484
36	Blk 724, Ang Mo Kio Ave 6, S(560724)	560724	ANG MO KIO	1.37217258545171	103.846510310202

Sample Data (MonthlyWeather)

MeanSunshineHours	MinHumidity	MeanHumidity	YearMonth	MeanMaxTemperature	MeanMinTemperature	AbsoluteExtremesMaxTemperature	AbsoluteExtremesMinTemperature	TotalRainfall	HighestDailyRainfall
2.7		89.7	1983_Dec	28.9	23.3	31.3	21.9	355.6	112.3
3.2		86.1	1983_Nov	30.5	24	32.6	21.3	227.5	65.1
5.2		82	1983_Oct	31.5	24.7	33.7	22.4	149.1	37.3
3.9		84.6	1983_Sep	31	24.7	32.8	22.4	250.1	112.9
6.3		83.1	1983_Aug	31.5	25.6	32.7	22.1	176	56.2
5.4		86.3	1983_Jul	31	24.9	33	21.4	124.1	41.6
5.9		84.7	1983_Jun	31.9	25.3	33.6	21.3	110.4	29.1
5.9		86.4	1983_May	32.5	25.2	34	23.5	292.9	48.2
6.6		81.6	1983_Apr	34.3	26.3	35.8	23.5	43.1	26.4
8.9		80.3	1983_Mar	34.4	25.4	35.8	24.3	64.4	54.1
9.3		81.4	1983_Feb	33.1	24.8	34.6	23.1	34	33.9
4.3		87.4	1983_Jan	30.3	24	32.1	23	253.6	56
3.3		88.7	1982_Dec	29.9	23.9	33	22.8	418.2	95.8
5.8		86.3	1982_Nov	32.4	24.5	34.3	23.1	189.9	67
5.6		83.6	1982_Oct	32.1	24.3	33.8	22.6	75.8	34.6
5.2		83.7	1982_Sep	31.4	25.3	33.2	23.5	42.1	15.8
5.4		83.7	1982_Aug	31.1	25	33.2	21.9	234.8	121.5
7.6		80.3	1982_Jul	31.6	25.5	33	22.1	58.5	18.8
7.3		81.8	1982_Jun	31.9	26	33.3	23.1	62.5	39.6
5.8		85.6	1982_May	31.7	25.2	32.9	23.7	166.4	44.7
4.7		88.1	1982_Apr	31.4	24.3	33.2	22.2	227.5	59.4
5.1		85.4	1982_Mar	31.7	24.3	34.3	22.3	90.7	24.6
7.6		82.1	1982_Feb	32.3	23.9	34.3	22.6	97.4	45
5.6		83.7	1982_Jan	29.8	23.3	31.9	21.9	85.8	28.9
5		87	1981_Dec	29.6	23.6	32.8	22.6	381.5	79.7
3.7		83.3	1981_Nov	30.9	24.1	34.3	22.6	53.5	16.6
5.7		85.6	1981_Oct	31.5	24.6	33.4	23.4	78.5	17.6
4.8		79	1981_Sep	30.9	24.2	32.6	22	149.3	37
7.9		77.9	1981_Aug	32.1	25.7	33	21	49.5	23.8
6.1		81.4	1981_Jul	31.1	24.5	33.4	21.7	207	39.6
6.8		81	1981_Jun	32.7	24.9	34.5	22.9	67.8	26.9
4.2		87.3	1981_May	31.6	24.5	34.4	21.9	158.4	44.4
4.7		86.2	1981_Apr	31.7	24.2	34	22.7	141	49.9
7.7		82.3	1981_Mar	32.2	24	34	22.5	55.5	37.6
7		84.5	1981_Feb	31.2	23.1	33.4	21.4	176.5	48.4
5.9		82.1	1981_Jan	30.3	22.6	32.6	21.7	37.3	20.2

Sample Data (Park)

Longitude	Latitude	ParkName	PlanningArea
103.836995927634	1.45752912996691	JANGGUS GARDEN	SEMBAWANG
103.949054175983	1.32472541179268	JLN LIMAU MANIS PG	BEDOK
103.86566703067	1.3603835275783	GARDEN VIEW PG	SERANGOON
103.832599363978	1.37869395342777	THOMSON GREEN PG	ANG MO KIO
103.867368435586	1.34713101817298	JLN RIANG PG	SERANGOON
103.861737336598	1.35280772776122	MEI HWAN CRESCENT PG	SERANGOON
103.833557588825	1.36212606679372	FULTON AVE PG	BISHAN
103.860427116114	1.38402943174027	MIMOSA TERRACE PG	SERANGOON
103.880903846017	1.35333321044422	JLN GENENG INTERIM PK	HOUGANG
103.838379768292	1.38860542866261	LENTOR WALK PG	ANG MO KIO
103.835072203421	1.38697094445849	FLORISSA PK PG	ANG MO KIO
103.807630569153	1.32673322347146	BOUGAINVILLEA PK	BUKIT TIMAH
103.765747964369	1.33427899697038	GREENRIDGE CRESCENT PG	BUKIT TIMAH
103.766772128758	1.34615105306235	Jalan Tekukor Playground	BUKIT TIMAH
103.76598447237	1.34051649266799	Highgate Walk Playground	BUKIT TIMAH
103.767556044785	1.29982839456609	Clementi Woods Park	CLEMENTI
103.718611913632	1.34008166817537	Lakeside Grove Playground	JURONG WEST
103.873049624105	1.32982620739316	SIANG KUANG AVE INTERIM PK	TOA PAYOH
103.833590422111	1.34152301286505	MACRITCHIE RESERVOIR PK	CENTRAL WATER CATCHMENT
103.884924857854	1.34618504678902	TAI KENG GARDENS PG	HOUGANG
103.846654778143	1.27808686933004	TELOK AYER PK	DOWNTOWN CORE
103.773340678073	1.36895143902394	CHESTNUT CLOSE PARK	BUKIT PANJANG
103.781617545651	1.4538037029389	WOODLANDS WATERFRONT PK	WOODLANDS
103.943909676406	1.33299843079949	JLN PARI DEDAP PG	BEDOK
103.91472539986	1.32742803694629	INTERIM PK AT LENGKONG ENAM	BEDOK
103.917184248938	1.32557239453209	Jalan Senang Linear Park	BEDOK
103.83629822702	1.36517069612276	Bishan-Ang Mo Kio Park (Pond Gardens)	BISHAN
103.832814917136	1.37170601144117	ST. NICHOLAS VIEW PLAYGROUND	ANG MO KIO
103.779243738199	1.4366577861849	WOODLANDS TOWN PK EAST	WOODLANDS
103.797934009008	1.27926286005946	HORTPARK	QUEENSTOWN
103.842482846587	1.42448806810676	YISHUN PK	YISHUN
103.829490457455	1.45064134615514	PEBBLE GARDEN	SEMBAWANG
103.836500475057	1.46136162644367	SEMBAWANG PK	SEMBAWANG
103.83482493173	1.34990620063447	TAMAN PERMATA PK	BISHAN
103.846320994422	1.27656099848663	TANJONG PAGAR PK	DOWNTOWN CORE
103.8477751085	1.29897074317253	HANDY RD OS	MUSEUM
103.829257356996	1.37252998423686	LEBAN PARK	ANG MO KIO

Sample Data (PlanningArea)

PlanningArea	Region	Area	KMeansCluster	No. of Parks	No. of Hawker Centers	Median Population	Median Dengue Cases	No. of Water Bodies
Ang Mo Kio	North-East	13.94	3	31	10	169,455	130	12
Bedok	East	21.69	5	57	10	286,580	696	51
Bishan	Central	7.62	3	17	1	90,290	169	9
Boon Lay	West	8.23	2	0	0	0	0	23
Bukit Batok	West	11.13	3	12	0	142,080	42	18
Bukit Merah	Central	14.34	3	7	16	154,205	41	14
Bukit Panjang	West	8.99	3	14	2	139,505	172	30
Bukit Timah	Central	17.53	3	35	0	76,185	69	21
Central Water Catchment	North	37.15	1	6	0	0	8	5
Changi	East	40.61	1	7	1	2,195	3	23
Changi Bay	East	1.7		0	0	0	0	0
Choa Chu Kang	West	6.11	4	2	0	183,250	160	12
Clementi	West	9.49	3	12	5	92,160	56	36
Downtown Core	Central	4.34	2	9	3	3,400	9	24
Geylang	Central	9.64	5	13	12	115,100	664	22
Hougang	North-East	13.93	4	17	3	223,565	470	39
Jurong East	West	17.83	3	4	5	84,280	56	31
Jurong West	West	14.69	4	6	2	269,350	247	35
Kallang	Central	9.17	3	9	5	101,865	217	34
Lim Chu Kang	North	17.3	2	4	0	0	0	18
Mandai	North	11.77	2	3	0	2,070	5	0
Marina East	Central	1.82	2	1	0	0	0	1
Marina South	Central	1.62	2	0	0	0	0	1
Marine Parade	Central	6.12	2	9	1	48,145	117	8
Museum	Central	0.83	2	9	0	340	5	0
Newton	Central	2.07	2	1	1	7,150	19	2
North-Eastern Islands	North-East	42.88	1	0	0	0	0	4
Novena	Central	8.98	3	9	5	48,450	91	23
Orchard	Central	0.96	2	2	0	830	62	0
Outram	Central	1.37	2	5	5	20,980	7	0
Pasir Ris	East	15.02	4	8	1	144,280	403	20
Paya Lebar	East	11.69	2	0	0	0	4	8
Pioneer	West	12.1	2	0	0	0	2	13
Punggol	North-East	9.34	3	2	1	138,810	24	34
Queenstown	Central	20.43	3	8	8	98,150	54	35
River Valley	Central	1.48	2	1	0	10,090	49	0
Rochor	Central	1.62	2	1	3	14,010	40	4

Sample Data (WaterBodies)

WaterBodyName	PlanningArea	Longitude	Latitude
kml_1	PIONEER	103.667601	1.326008
kml_2	TUAS	103.647269	1.33228
kml_3	WESTERN WATER CATCHMENT	103.66305	1.396117
kml_5	WESTERN WATER CATCHMENT	103.732084	1.39147
kml_7	WESTERN WATER CATCHMENT	103.731595	1.379204
kml_8	JURONG EAST	103.748197	1.331808
kml_11	TUAS	103.637011	1.3166
kml_13	TUAS	103.636659	1.346438
kml_26	WESTERN WATER CATCHMENT	103.723988	1.40966
kml_29	BUKIT MERAH	103.819451	1.291741
kml_33	BOON LAY	103.699133	1.310106
kml_41	CHANGI	103.980023	1.361328
kml_42	TUAS	103.639559	1.316185
kml_45	TUAS	103.637907	1.322332
kml_49	BUKIT MERAH	103.819073	1.288034
kml_60	NORTH-EASTERN ISLANDS	103.978889	1.405316
kml_75	NORTH-EASTERN ISLANDS	103.681316	1.309836
kml_77	WESTERN WATER CATCHMENT	103.673434	1.40078
kml_78	PIONEER	103.670774	1.309767
kml_79	BOON LAY	103.701942	1.304649
kml_80	WESTERN WATER CATCHMENT	103.692931	1.391427
kml_82	JURONG EAST	103.747025	1.309406
kml_83	JURONG EAST	103.731568	1.304594
kml_84	PIONEER	103.671027	1.307409
kml_85	TUAS	103.6509	1.326214
kml_89	WESTERN WATER CATCHMENT	103.683323	1.394512
kml_103	LIM CHU KANG	103.70365	1.439261
kml_106	JURONG EAST	103.728043	1.341273
kml_133	JURONG EAST	103.750273	1.32587
kml_136	TUAS	103.653178	1.326888
kml_140	WESTERN WATER CATCHMENT	103.68136	1.399738
kml_141	TUAS	103.654716	1.320449
kml_144	WESTERN WATER CATCHMENT	103.730791	1.394683
kml_145	TUAS	103.632182	1.330487
kml_146	PIONEER	103.670374	1.315667
kml_147	TUAS	103.641653	1.318413

Sample Data
(Year)

Year
2013
2014
2015
2016
2017
2018
2019
2020

Sample Data
(YearlyGreenhouseGasEmission)

Year	CarbonDioxide	Methane	NitrousOxide	Hydrofluorocarbons	Perfluorocarbons	SulphurHexafluoride	NitrogenTrifluoride
2020	46.7	0.1	0.6	0.5	1.3	0.1	0.4
2019	49	0.1	0.6	0.4	1.4	0.1	0.4
2018	50.3	0.1	0.5	0.5	1.4	0.1	0.4
2017	50.1	0.1	0.4	0.5	1.4	0.1	0.4
2016	49.1	0.1	0.3	0.5	1.2	0.1	0.2
2015	49.4	0.1	0.3	0.4	1.3	0.1	0.2
2014	47.6	0.1	0.3	0.4	1.3	0.2	0.2
2013	47	0.1	0.3	0.4	1.2	0.1	0.1

Sample Data (YearlyPopulation)

PlanningArea	Town	AgeBinOfFive	Sex	TypeOfDwelling	Population	Year
Bukit Merah	Alexandra Hill	00-04	Males	HUDC Flats (excluding those privatised)	0	2020
Bukit Merah	Alexandra Hill	05-09	Males	HUDC Flats (excluding those privatised)	0	2020
Bukit Merah	Alexandra Hill	10-14	Males	HUDC Flats (excluding those privatised)	0	2020
Bukit Merah	Alexandra Hill	15-19	Males	HUDC Flats (excluding those privatised)	0	2020
Bukit Merah	Alexandra Hill	20-24	Males	HUDC Flats (excluding those privatised)	0	2020
Bukit Merah	Alexandra Hill	25-29	Males	HUDC Flats (excluding those privatised)	0	2020
Bukit Merah	Alexandra Hill	30-34	Males	HUDC Flats (excluding those privatised)	0	2020
Bukit Merah	Alexandra Hill	35-39	Males	HUDC Flats (excluding those privatised)	0	2020
Bukit Merah	Alexandra Hill	40-44	Males	HUDC Flats (excluding those privatised)	0	2020
Bukit Merah	Alexandra Hill	45-49	Males	HUDC Flats (excluding those privatised)	0	2020
Bukit Merah	Alexandra Hill	50-54	Males	HUDC Flats (excluding those privatised)	0	2020
Bukit Merah	Alexandra Hill	55-59	Males	HUDC Flats (excluding those privatised)	0	2020
Bukit Merah	Alexandra Hill	60-64	Males	HUDC Flats (excluding those privatised)	0	2020
Bukit Merah	Alexandra Hill	65-69	Males	HUDC Flats (excluding those privatised)	0	2020
Bukit Merah	Alexandra Hill	70-74	Males	HUDC Flats (excluding those privatised)	0	2020
Bukit Merah	Alexandra Hill	75-79	Males	HUDC Flats (excluding those privatised)	0	2020
Bukit Merah	Alexandra Hill	80-84	Males	HUDC Flats (excluding those privatised)	0	2020
Bukit Merah	Alexandra Hill	85-89	Males	HUDC Flats (excluding those privatised)	0	2020
Bukit Merah	Alexandra Hill	90+	Males	HUDC Flats (excluding those privatised)	0	2020
Bukit Merah	Alexandra North	00-04	Males	HUDC Flats (excluding those privatised)	0	2020
Bukit Merah	Alexandra North	05-09	Males	HUDC Flats (excluding those privatised)	0	2020
Bukit Merah	Alexandra North	10-14	Males	HUDC Flats (excluding those privatised)	0	2020
Bukit Merah	Alexandra North	15-19	Males	HUDC Flats (excluding those privatised)	0	2020
Bukit Merah	Alexandra North	20-24	Males	HUDC Flats (excluding those privatised)	0	2020
Bukit Merah	Alexandra North	25-29	Males	HUDC Flats (excluding those privatised)	0	2020
Bukit Merah	Alexandra North	30-34	Males	HUDC Flats (excluding those privatised)	0	2020
Bukit Merah	Alexandra North	35-39	Males	HUDC Flats (excluding those privatised)	0	2020
Bukit Merah	Alexandra North	40-44	Males	HUDC Flats (excluding those privatised)	0	2020
Bukit Merah	Alexandra North	45-49	Males	HUDC Flats (excluding those privatised)	0	2020
Bukit Merah	Alexandra North	50-54	Males	HUDC Flats (excluding those privatised)	0	2020
Bukit Merah	Alexandra North	55-59	Males	HUDC Flats (excluding those privatised)	0	2020
Bukit Merah	Alexandra North	60-64	Males	HUDC Flats (excluding those privatised)	0	2020
Bukit Merah	Alexandra North	65-69	Males	HUDC Flats (excluding those privatised)	0	2020
Bukit Merah	Alexandra North	70-74	Males	HUDC Flats (excluding those privatised)	0	2020
Bukit Merah	Alexandra North	75-79	Males	HUDC Flats (excluding those privatised)	0	2020
Bukit Merah	Alexandra North	80-84	Males	HUDC Flats (excluding those privatised)	0	2020
Bukit Merah	Alexandra North	85-89	Males	HUDC Flats (excluding those privatised)	0	2020