

Installing New Wireless Hot spots over Public Spaces in Brisbane

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Outline

- 1 Introduction
- 2 Data
- 3 Exploratory Data Analysis
- 4 Results

Introduction

Background

- Brisbane- capital of Queensland, most populous city in Australia
- National parks, libraries and public spaces
- Free wireless internet (Wi-Fi)- connected and accessible city
- Specific Locations

Problem Statement

- Predict some of the suburban areas and public spaces over Brisbane where Hot spots need to be installed.

Audiences

- Brisbane City Council
- Tourists
- Students
- Inhabitants

Data

Data Sources

	Wifi Hotspot Name	Address	Suburb	Latitude	Longitude	Site
0	Annerley Library Wifi	450 Ipswich Road	ANNERLEY	-27.509423	153.033322	LIB
1	Ashgrove Library Wifi	87 Amarina Avenue	ASHGROVE	-27.443946	152.987098	LIB
2	Banyo Library Wifi	284 St. Vincents Road	BANYO	-27.373966	153.078323	LIB
3	Bracken Ridge Library Wifi	Corner Bracken and Barrett Street	BRACKEN RIDGE	-27.317973	153.037874	LIB
4	Brisbane Square Library Wifi	Brisbane Square, 266 George Street	BRISBANE CITY	-27.470912	153.022460	LIB

```
FI.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 344 entries, 0 to 343
Data columns (total 6 columns):
Wifi Hotspot Name    344 non-null object
Address              344 non-null object
Suburb               344 non-null object
Latitude             344 non-null float64
Longitude            344 non-null float64
Site                 344 non-null object
dtypes: float64(2), object(4)
memory usage: 16.2+ KB
```

Data

Data Sources

	Venue Name	Latitude	Longitude	Venue address	Opening hours	Library facilities and services	Phone number	Parking	Meeting Room Information
0	Annerley Library	-27.509341	153.033310	450 Ipswich Rd, Annerley 4103	Closed on public holidays\r; Monday, Tuesday a...	Books, Magazines and Newspapers; eBooks, Digit...	Council - 07 3403 8888	On street, off street	NaN
1	Ashgrove Library	-27.443876	152.987086	87 Amarina Ave, Ashgrove 4060	Closed on public holidays\r; Monday, Wednesday...	Books, Magazines and Newspapers; eBooks, Digit...	Council - 07 3403 8888	On street, off street	The Ashgrove Library meeting room is available...
2	Banyo Library	-27.374391	153.078259	284 St Vincents Rd, Banyo 4014	Closed on public holidays\r; Monday and Sunday...	Books, Magazines and Newspapers; eBooks, Digit...	Council - 07 3403 8888	On street, off street	The Banyo Library meeting rooms are available ...
3	Bracken Ridge Library	-27.317963	153.037889	Corner Bracken and Barrett Streets, Bracken Ri...	Closed on public holidays\r; Monday and Sunday...	Books, Magazines and Newspapers\r; eBooks, Digit...	Council - 07 3403 8888	On street, off street	The Bracken Ridge Library meeting room is avail...
4	Brisbane Square Library	-27.470824	153.022451	266 George St, Brisbane City, Q 4000	Closed on public holidays\r; Monday: 9am - 6pm\r; n...	Books, Magazines and Newspapers; eBooks, Digit...	Council - 07 3403 8888	No dedicated parking	The Brisbane Square Library's 3 meeting rooms ...

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l.info()
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```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 33 entries, 0 to 32
```

Data

Data Sources

OBJECTID	PARK_NUMBER	PARK_NAME	SAP_ASSET_ID	HOUSE_NUMBER	STREET_ADDRESS	SUBURB	POST_CODE	LONG	LAT	SHAPE_Len
0	1	D1573 THOMAS PLACE PARK	B-RE-0458	151A	ANCASTER ROAD	UPPER KEDRON	4055	152.915628	-27.410609	811.4379
1	2	D1575 SCARLET PLACE PARK	B-RE-0457	36	SCARLET PLACE	FOREST LAKE	4078	152.971609	-27.611549	181.4361
2	3	D1576 PAT RAFTER PARK	B-RE-0456	20	MEDALLION PLACE	CARSELDINE	4034	153.009133	-27.341620	1357.9321
3	4	D1578 PARKWAY PLACE PARK	B-RE-0455	6	EVERGREEN CLOSE	KENMORE	4069	152.930905	-27.521829	297.2431
4	5	D1579 WINROCK STREET PARK	B-RE-0454	80	MCCONNELL CRESCENT	BROOKFIELD	4069	152.918997	-27.510579	265.1021

```
RKS.info()
```

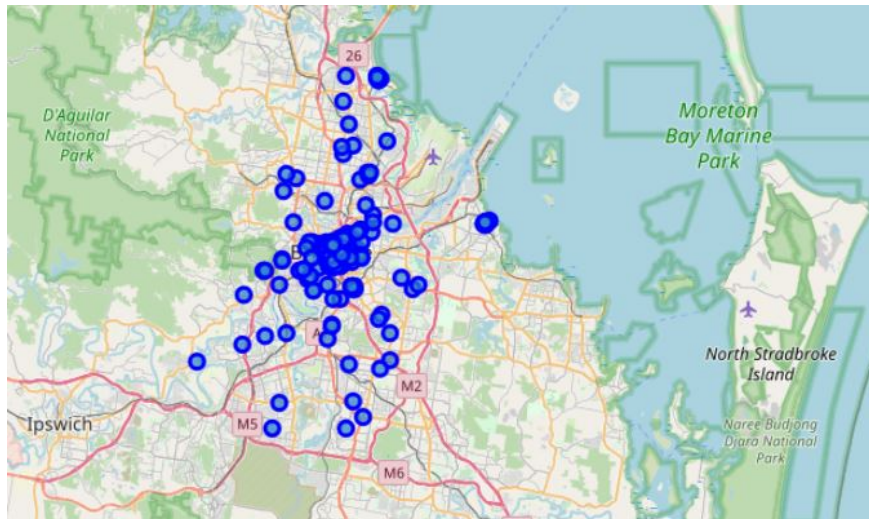
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Data columns (total 12 columns):
OBJECTID      2167 non-null int64
PARK_NUMBER    2167 non-null object
PARK_NAME      2167 non-null object
SAP_ASSET_ID   2167 non-null object
HOUSE_NUMBER   2167 non-null object
STREET_ADDRESS 2167 non-null object
SUBURB         2167 non-null object
POST_CODE      2167 non-null object
LONG           2167 non-null float64
LAT            2167 non-null float64
SHAPE_Len      2167 non-null float64
```


Data

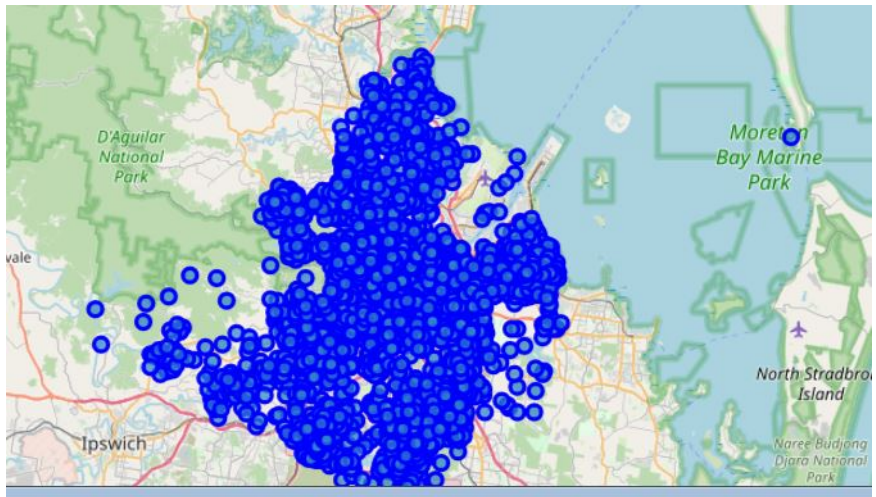
Foursquare API

- Local search-and-discovery mobile app developed by Foursquare Labs Inc.
- Personalized recommendations of places to go near a user's current location Users' considering previous browsing history and check-in history
- Features: Tips and expertise, Ratings, Brands, Superusers, Places API

Locations with free internet connection in Brisbane



Locations with parks in Brisbane



Venues in Brisbane

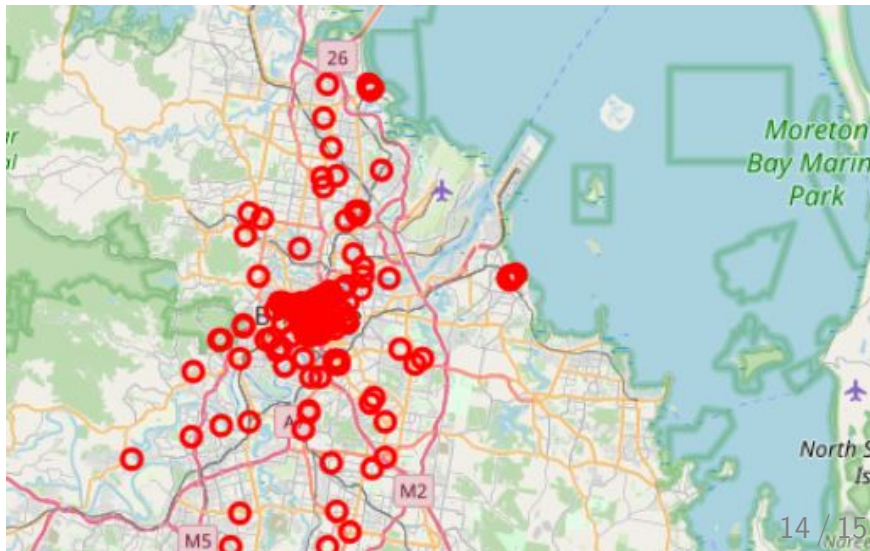
Annerley Junction - Bus Stop 22	1	1	1	1	1	1
Anouk	8	8	8	8	8	8
Anytime Fitness	14	14	14	14	14	14
Anzac Park	1	1	1	1	1	1
Anzac Square	62	62	62	62	62	62
Anzac Square War Memorial	28	28	28	28	28	28
Apollo Road Ferry Terminal	1	1	1	1	1	1
...
Woolworths	95	95	95	95	95	95
Woolworths Metro	6	6	6	6	6	6
Wrapture Cafe	1	1	1	1	1	1
Wynnum Beach	9	9	9	9	9	9

Top Rated Venues in Brisbane

	Suburb	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue
0	ANNERLEY	Café	Pharmacy	Pub	Sporting Goods Shop	Bus Stop	Camera Store	Supermarket	Thai Restaurant	Coffee Shop
1	ASCOT	Cupcake Shop	Café	Gift Shop	Electronics Store	Grocery Store	Fabric Shop	French Restaurant	Football Stadium	Food Court
2	ASHGROVE	Café	Indian Restaurant	Gym	Ice Cream Shop	Convenience Store	Chinese Restaurant	Fruit & Vegetable Store	History Museum	Electronics Store
3	BALMORAL	Café	Italian Restaurant	Sushi Restaurant	Coffee Shop	Bookstore	Vietnamese Restaurant	BBQ Joint	Pizza Place	Bakery
4	BANYO	Café	Mediterranean Restaurant	Pharmacy	Coffee Shop	Park	Grocery Store	Yoga Studio	Fabric Shop	Football Stadium
5	BELLBOWRIE	Soccer Field	Supermarket	Shopping Mall	Café	Yoga Studio	Fabric Shop	Football Stadium	Food Court	Flea Market

Results

New Hot spot LOcations



Results

- New wireless hot spots need to be installed in suburban areas like 'ACACIA RIDGE', 'ALBION', 'ALDERLEY', 'ALGESTER', 'BOONDALL', 'BOWEN HILLS', 'CHAPEL HILL', 'CHELMER', 'CHERMSIDE WEST', 'DOOLANDELLA', 'DREWVALE', 'DURACK', 'DUTTON PARK', 'FIG TREE POCKET', 'GAYTHORNE', 'GEEBUNG', 'WACOL', 'WAKERLEY', 'WAVELL HEIGHTS', 'YEERONGPILLY', 'YERONGA'.

THANK YOU