

Wifi locations in NYC report

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Part 1-Business Problem:

The world is large and also small, because now everyone is connected with each other through internet. We can send messages, have video calls, share happy moments through the internet to the people around the world, wherever we are. Is this true? Yes, but we have to have the access to the internet everywhere. The mobile provider companies offer a lot of data plans, for some people, these data plans are not enough especially during the travel and much higher data amount is required. With the high demand of internet connection, people want to look for wifi locations, especially when travelling. People who want to find wifi locations will be interested for this project. Therefore, looking for wifi location is important. In this project, we will map the wifi locations in new york, which could be used for people to find where they can get the wifi in new york.

To further stress how important it is to get the access to internet, let's see what we can do through the internet: 1) we can learn, wherever you have internet, you can access the online learning source, such as the coursera. 2) online shopping, you can shop different merchandise, books, baby gear, furnitures, clothes, even grocery you can buy online now. 3) communication, sending emails, messages, video calls with family and friends. 4) entertainment, you can watch online videos, listen to music. 5) looking for what you need, like which hotel to stay and which restaurant to have dinner. Those are not the only thing internet can do, but some of the activities require a lot of data, such as watching video and video call, so let's see where we can find the wifi locations if we go to NYC.

Part 2-Data Source:

Data was obtained from NYC open data website <https://data.cityofnewyork.us/Social-Services/NYC-Wi-Fi-Hotspot-Locations/a9we-mtpn>.

The original data is consisted of 29 columns and 3345 rows, the information such as name of the wifi, latitude and longitude of the wifi, and remarks saying whether the wifi is free and the speed of the wifi, and so on.

BORO	the_geom	TYPE	OBJECTID	PROVIDER	NAME	LAT	LOCATION	LON	X	Y	LOCATION_T	
0	QU	POINT (-73.94458300007643 40.755726999970044)	Free	8641	Spot On Networks	QUEENS BRIDGE - JACOB A. RIIS Settlement House	40.755727	10-25 41 AVENUE	-73.944583	999603.226171	214613.274563	Indoor AP - Community Center - Computer Rm
REMARKS	CITY	SSID	SOURCEID	ACTIVATED	BOROCODE	BORONAME	NTACODE	NTANAME	COUNDIST	POSTCODE	BOROCD	
Free - Up to 25 mbs Wi-Fi Service	Queens	Quensbridge Connected	NYC HOUSING AUTHORITY	05/01/2018 12:00:00 AM +0000	4	Queens	QN68	Queensbridge- Ravenswood- Long Island City	26	11101	401	
CT2010	BOROCT2010	BIN	BBL	DOITT_ID								
25	4002500	4433386	4004700100	4746								

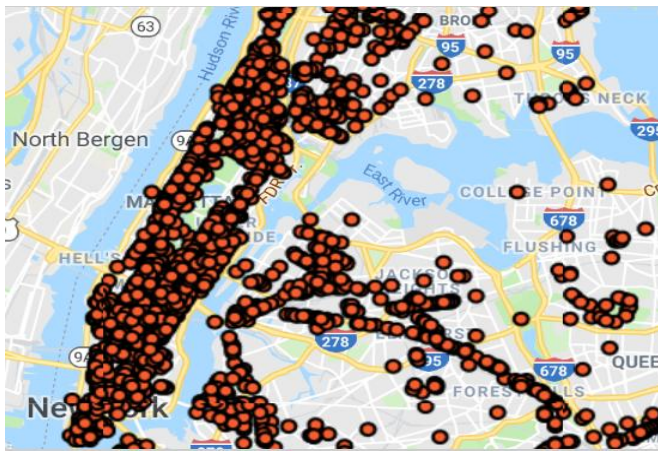
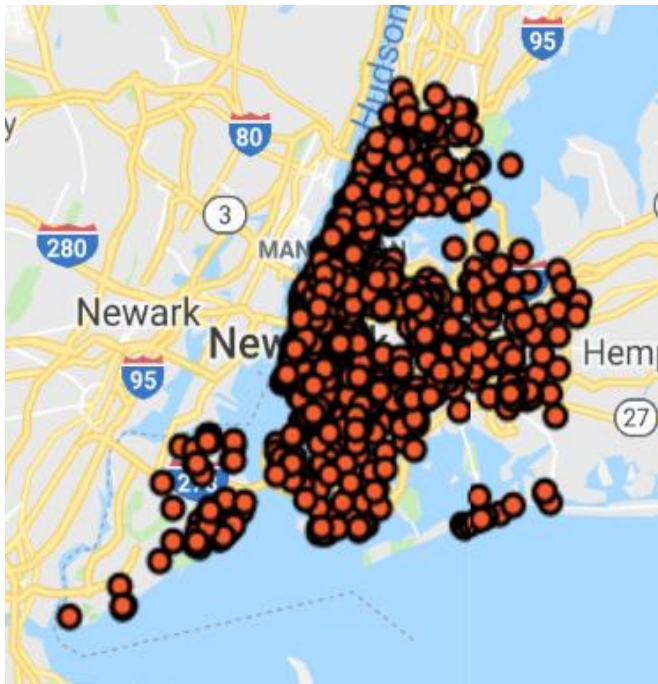
Part 3-Methodology:

To Map the locations of wifi, the data set was cleaned by dropping unnecessary columns and re-name some of the columns to make the meaning more clear:

	NAME	Latitude	Longitude	Borough
0	QUEENS BRIDGE - JACOB A. RIIS Settlement House	40.755727	-73.944583	Queens
1	QUEENS BRIDGE - JACOB A. RIIS Settlement House	40.755333	-73.944131	Queens
2	QUEENS BRIDGE - JACOB A. RIIS Settlement House	40.755751	-73.945166	Queens
3	QUEENS BRIDGE - JACOB A. RIIS Settlement House	40.755751	-73.945166	Queens
4	QUEENS BRIDGE - JACOB A. RIIS Settlement House	40.755751	-73.945166	Queens

The latitude and longitude data was used to map the wifi locations on NYC map

Part 4-results and conclusion:



- 1) In manhattan area, the wifi location density is very high.
- 2) If you go to center park, there won't be wifi locations. Anyone who is worrying about health problems when exposed to wifi radiation can stay more time in central park.
- 3) Around the high way areas, there's generally no wifi locations.