

CAPSTONE PROJECT DATA SCIENCE

CAPSTONE PROJECT

Business Problem

Find the Best location in Puerto Rico to start Burger point

Methodology

We need to understand the neighborhood in order to find the best location for starting new Burger point. We should find a location where there are more schools, universities and offices. Utilized Foursquare API call to do the neighborhood analysis.
We will analyze the data to find the location where more offices , schools and universities. Used Forsquare API calls to perform this analysis.

Data Section:

Data for the analysis is taken from the below URL

[https://zipcodedownload.com/lookup/Puerto Rico](https://zipcodedownload.com/lookup/Puerto_Rico)

It has Zip code, City Name, State Name columns and links to find the latitude and longitude for each Zip code. I have pulled all these details and saved it in csv file

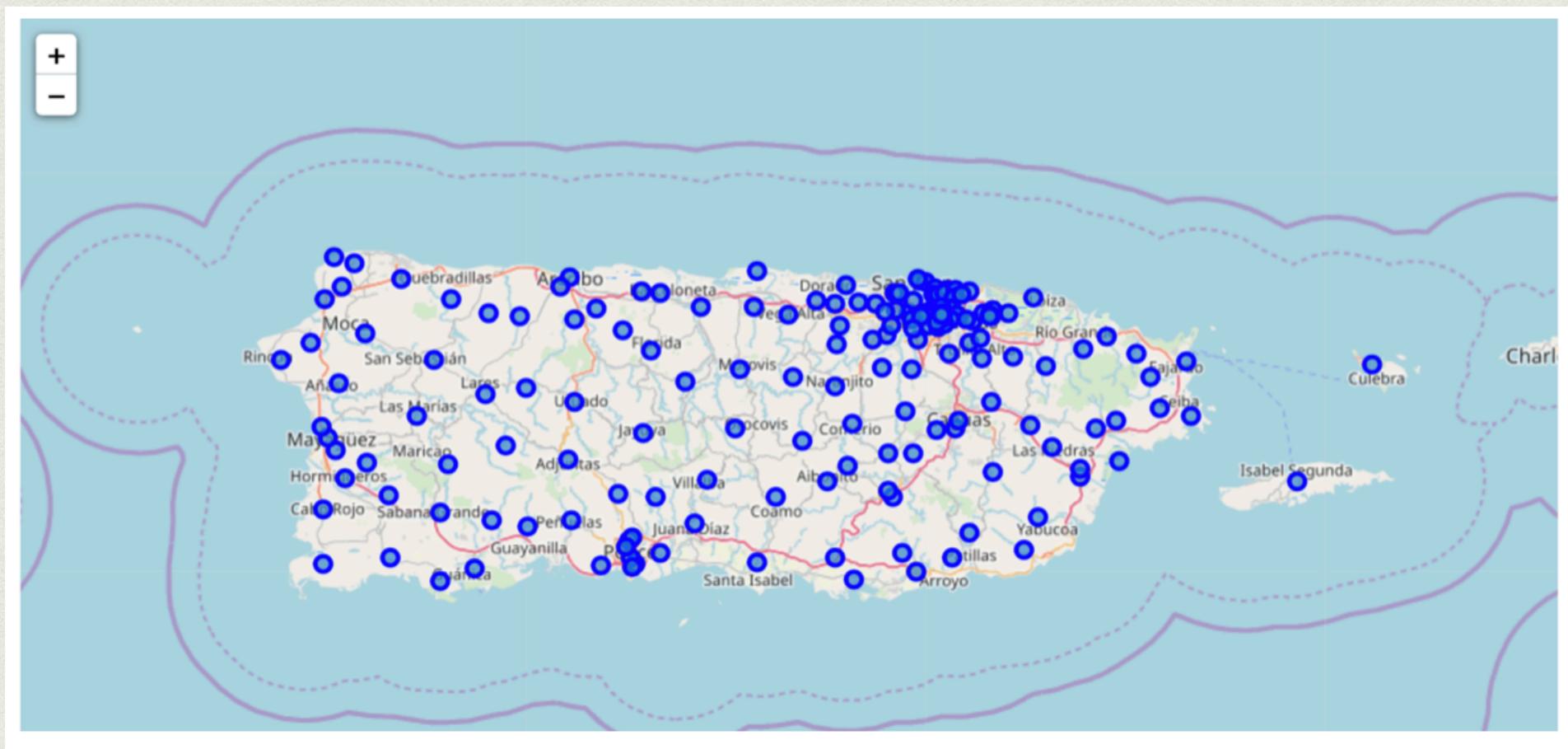
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Out[2]:

	ZIP	CITY NAME	COUNTY NAME	STATE NAME	LAT	LNG
0	00601	Adjuntas	Adjuntas	Puerto Rico	18.165950	-66.723630
1	00602	Aguada	Aguada	Puerto Rico	18.361945	-67.175597
2	00603	Aguadilla	Aguadilla	Puerto Rico	18.455183	-67.119887
3	00604	Aguadilla	Aguadilla	Puerto Rico	18.505290	-67.135900
4	00605	Aguadilla	Aguadilla	Puerto Rico	18.436150	-67.151340
5	00606	Maricao	Maricao	Puerto Rico	18.158345	-66.932911
6	00610	Anasco	Anasco	Puerto Rico	18.295366	-67.125135
7	00611	Angeles	Utuado	Puerto Rico	18.287720	-66.797580
8	00612	Arecibo	Arecibo	Puerto Rico	18.402253	-66.711397
9	00613	Arecibo	Arecibo	Puerto Rico	18.472740	-66.719280
10	00614	Arecibo	Arecibo	Puerto Rico	18.456900	-66.735890

Locations in Puerto Rico

Below table and Map shows the locations to analyze



Below table and Map shows the Offices in PR

Offices

```
: zipcode_venues_office = getNearbyVenues(names=df['ZIP'], latitudes=df['LAT'], longitudes=df['LNG'], radius=1000, categories='all')
zipcode_venues_office.head()
```

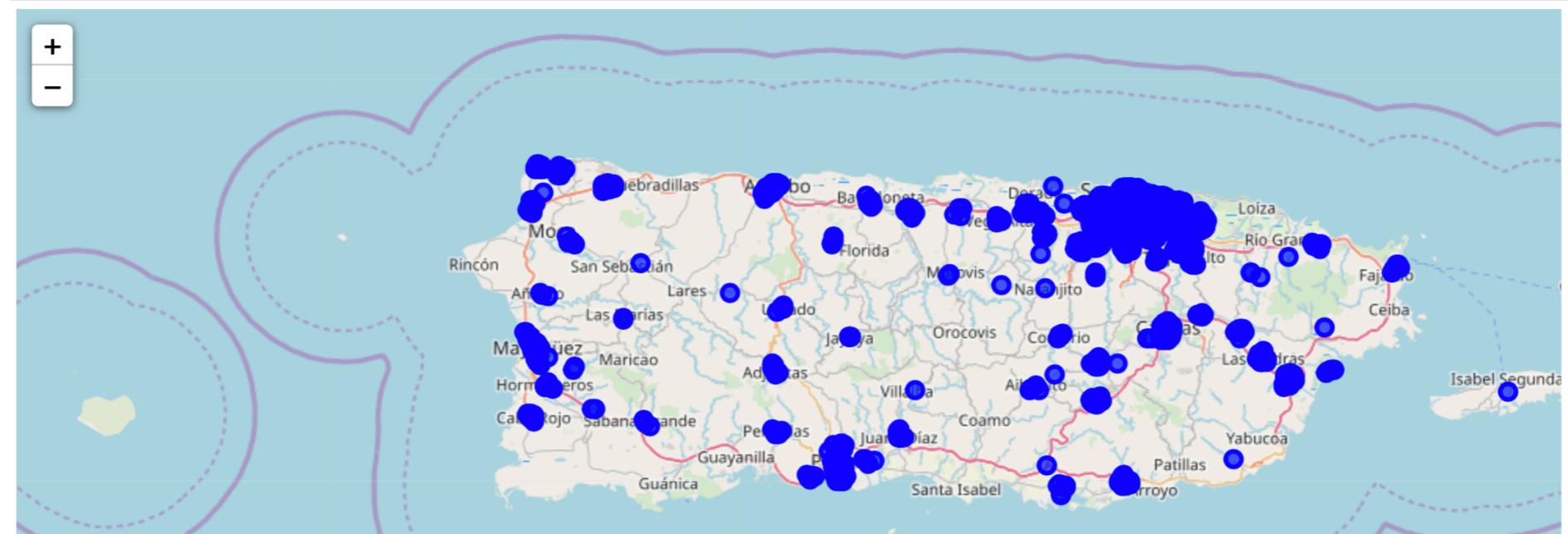
	Localidad	Localidad	Latitude	Localidad	Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
0	00601		18.16595		-66.72363	Comite PPD Adjuntas	18.165085	-66.723804	Government Building
1	00601		18.16595		-66.72363	Tribunal de Primera Instancia de Adjuntas	18.166603	-66.724940	Courthouse
2	00601		18.16595		-66.72363	COMICIÓN ESTATAL DE ELECCIONES	18.164359	-66.723519	Voting Booth
3	00601		18.16595		-66.72363	Funeraria Del Carmen	18.162893	-66.725784	Funeral Home
4	00601		18.16595		-66.72363	US Postal Office (Correo Adjuntas)	18.163619	-66.721990	Post Office

```
: zipcode_venues_office.shape
```

```
: (3825, 7)
```

Offices in MAP

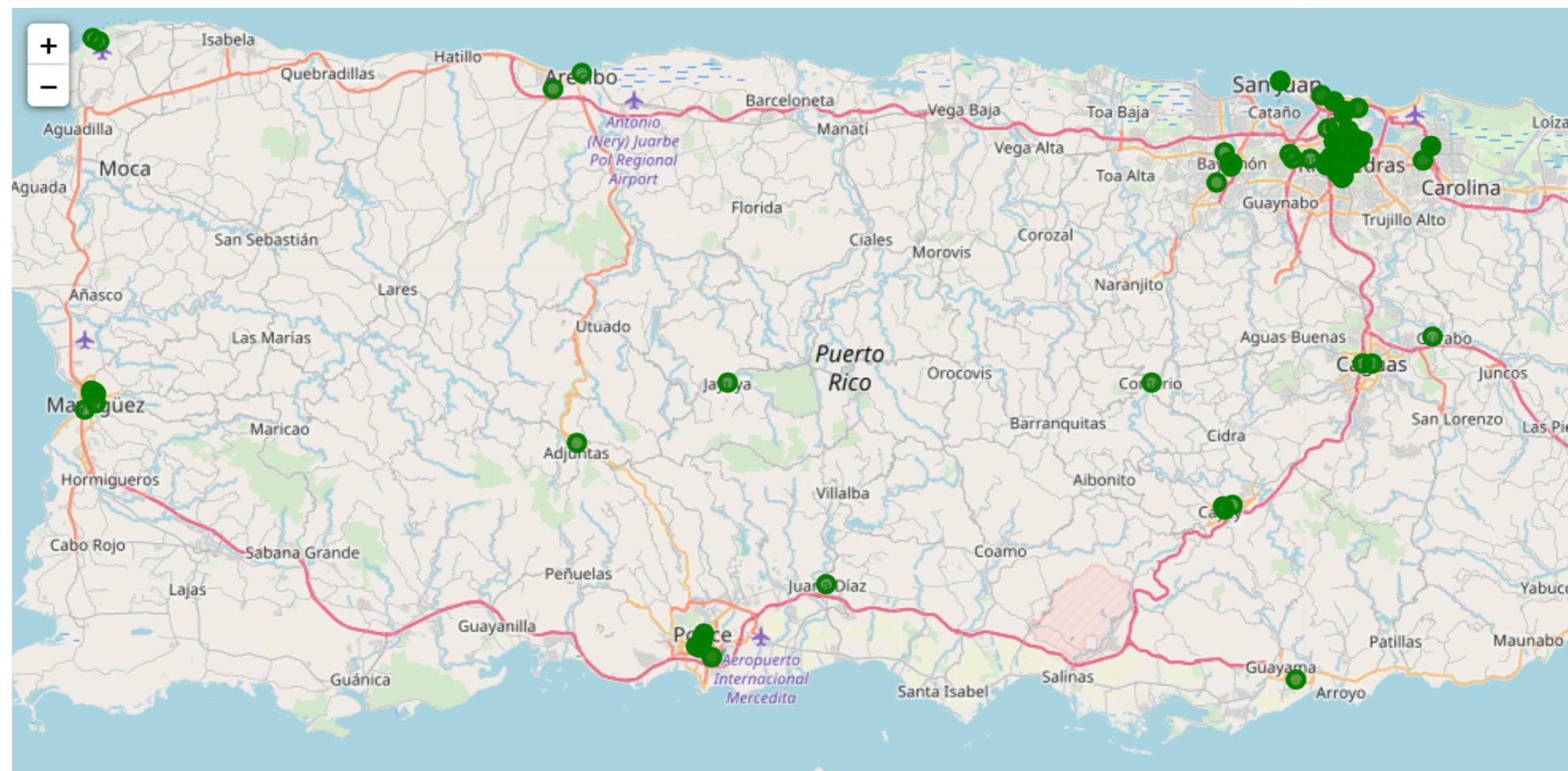
```
: map_zipcode_office = folium.Map(location=[latitude, longitude], zoom_start=12)
addToMap(zipcode_venues_office, 'blue', map_zipcode_office)
map_zipcode_office
```



Below table and Map shows the Universities in Puerto Rico

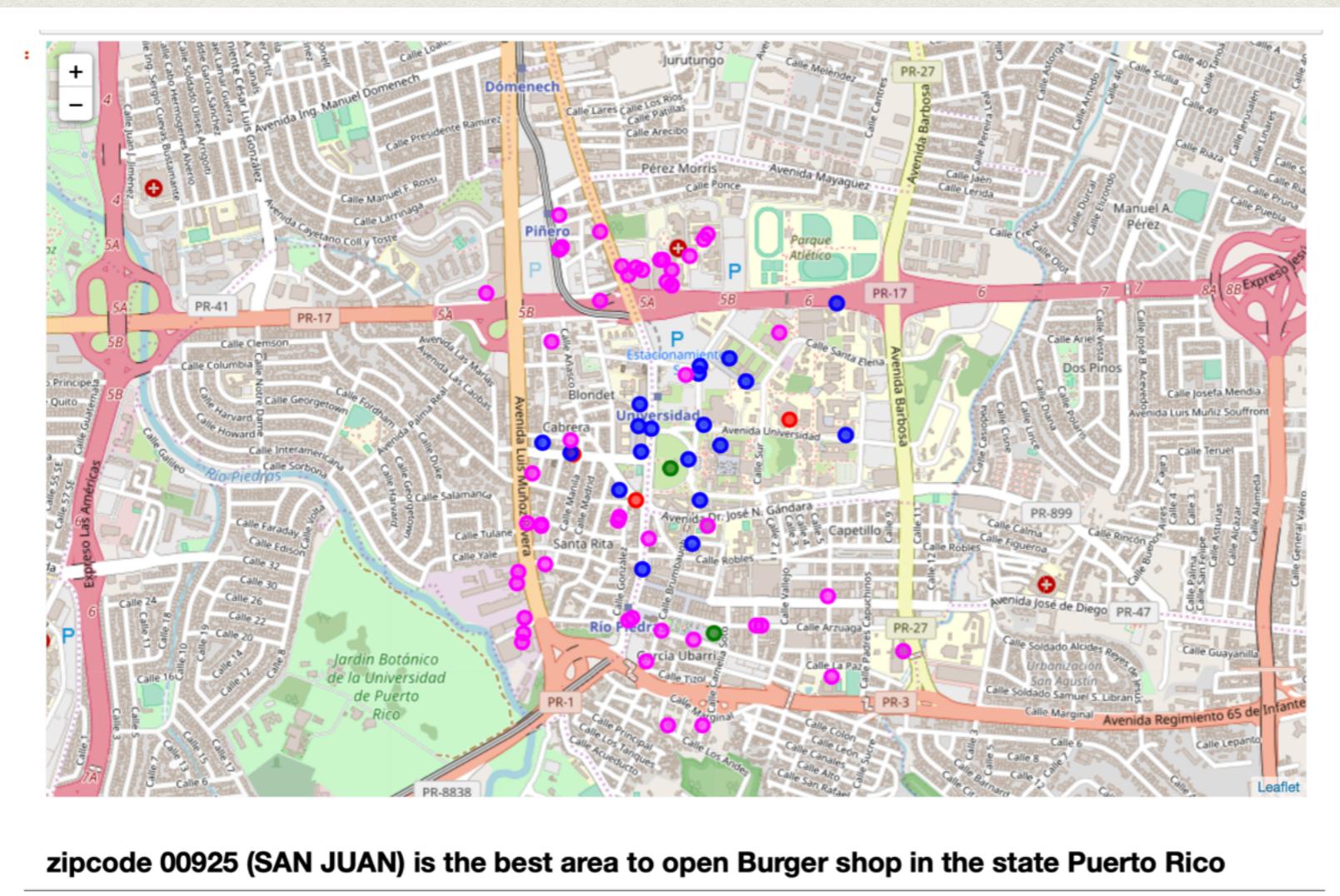
Map showing universities

```
: map_zipcode_uni = folium.Map(location=[latitude, longitude], zoom_start=12)
addToMap(zipcode_venues_uni, 'green', map_zipcode_uni)
map_zipcode_uni
```



Below map shows the neighborhood of our potential place of our new Burger point

Blue shows Universities
Pink shows Offices
Green shows schools
Red shows Burger Points



Results and Discussion

Based on the entire analysis and applying weights ,

The best score goes to the location zip code: 00925.

This location is best for starting a new Burger point.

Conclusion:

One can start a new Burger point at SAN JUAN city in Puerto Rico (zip code 00925) to serve more people and earn more profits