

Data

I'll get all zip codes and neighborhood names of Guadalajara from this web page, <https://codigo-postal.co/en-us/mexico/jalisco/guadalajara/>, so I can create a data frame like this:

| | Asentamiento | Municipality | State | Type | ZIP Code |
|---|---------------------------------|--------------|---------|--------|----------|
| 0 | Colonia 1 de Mayo | Guadalajara | Jalisco | Urbano | 44970 |
| 1 | Unidad habitacional 18 de Marzo | Guadalajara | Jalisco | Urbano | 44960 |
| 2 | Unidad habitacional 2001 | Guadalajara | Jalisco | Urbano | 44820 |
| 3 | Colonia 5 de Mayo | Guadalajara | Jalisco | Urbano | 44970 |
| 4 | Colonia 5 de Mayo 2a Secc | Guadalajara | Jalisco | Urbano | 44970 |

Once I get that data frame, I'll drop State, Type and Municipality columns, because is the same data for all neighborhoods. Then I need to rearrange columns to have Zip code as first column, like this:

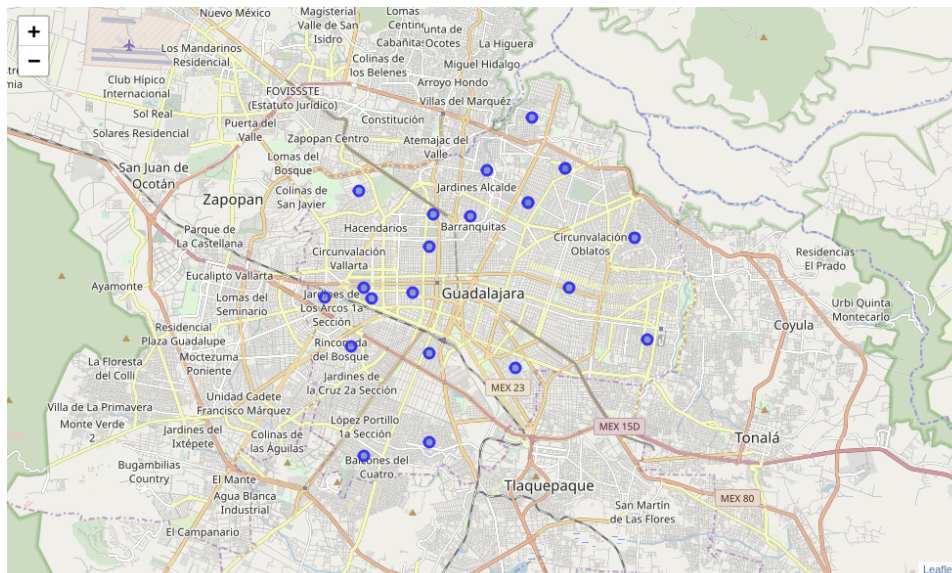
| | ZIP Code | Asentamiento |
|---|----------|---------------------------------|
| 0 | 44970 | Colonia 1 de Mayo |
| 1 | 44960 | Unidad habitacional 18 de Marzo |
| 2 | 44820 | Unidad habitacional 2001 |
| 3 | 44970 | Colonia 5 de Mayo |
| 4 | 44970 | Colonia 5 de Mayo 2a Secc |

Now that I have the data frame with the format that I need, is necessary to merge duplicate records for zip code on the same row, so data frame will look like this:

| | ZIP Code | Asentamiento |
|---|----------|---|
| 0 | 44130 | Fraccionamiento Arcos, Colonia Arcos Vallarta,... |
| 1 | 44150 | Colonia Barrera, Colonia Barrera |
| 2 | 44160 | Colonia Americana, Colonia Americana |
| 3 | 44200 | Colonia Artesanos, Colonia Artesanos |
| 4 | 44230 | Fraccionamiento Autocinema, Fraccionamiento Au... |
| 5 | 44250 | Colonia Balcones de Huentitán, Colonia Balcone... |
| 6 | 44260 | Colonia Barrio Mezquitan, Colonia Barrio Mezqu... |
| 7 | 44270 | Colonia Alcalde Barranquitas, Colonia Alcalde ... |
| 8 | 44300 | Fraccionamiento Batallón de San Patricio, Frac... |
| 9 | 44306 | Colonia Bosques de La Cantera, Colonia Bosques... |

| | ZIP Code | Latitude | Longitude |
|---|----------|----------|-----------|
| 0 | 44100 | 20.6743 | -103.3501 |
| 1 | 44110 | 20.6731 | -103.3927 |
| 2 | 44130 | 20.6733 | -103.3804 |
| 3 | 44140 | 20.6689 | -103.3724 |
| 4 | 44150 | 20.6696 | -103.3774 |

| | ZIP Code | Asentamiento | Latitude | Longitude |
|---|----------|---|----------|-----------|
| 0 | 44130 | Fraccionamiento Arcos, Colonia Arcos Vallarta,... | 20.6733 | -103.3804 |
| 1 | 44150 | Colonia Barrera, Colonia Barrera | 20.6696 | -103.3774 |
| 2 | 44160 | Colonia Americana, Colonia Americana | 20.6718 | -103.3631 |
| 3 | 44200 | Colonia Artesanos, Colonia Artesanos | 20.6868 | -103.3573 |
| 4 | 44230 | Fraccionamiento Autocinema, Fraccionamiento Au... | 20.7118 | -103.3371 |



Is hard to find a document with all Guadalajara Neighborhoods and it's latitude longitude, so I had to try to find, and collect them one by one and create my own csv file do display the map above. One think to take in count here is that some zip codes are very close and the lat, log for it is the same, that's why we can see not the entire 37 Neighborhoods with it's blue mark.

Once that I have all this information I'll do a request to foursquare api and try to get all information related with bakeries close to those locations, so I can start to do the analysis and try to find what is the best place to open a new bakery.