

Capstone project

THE BATTLE OF THE NEIGHBORHOODS

CONVENIENCE STORE OPEN

Problem Description

- Convenience store in Taiwan is popular.
- But in some country is not enough.
- Find location to open convenience store in my hometown.

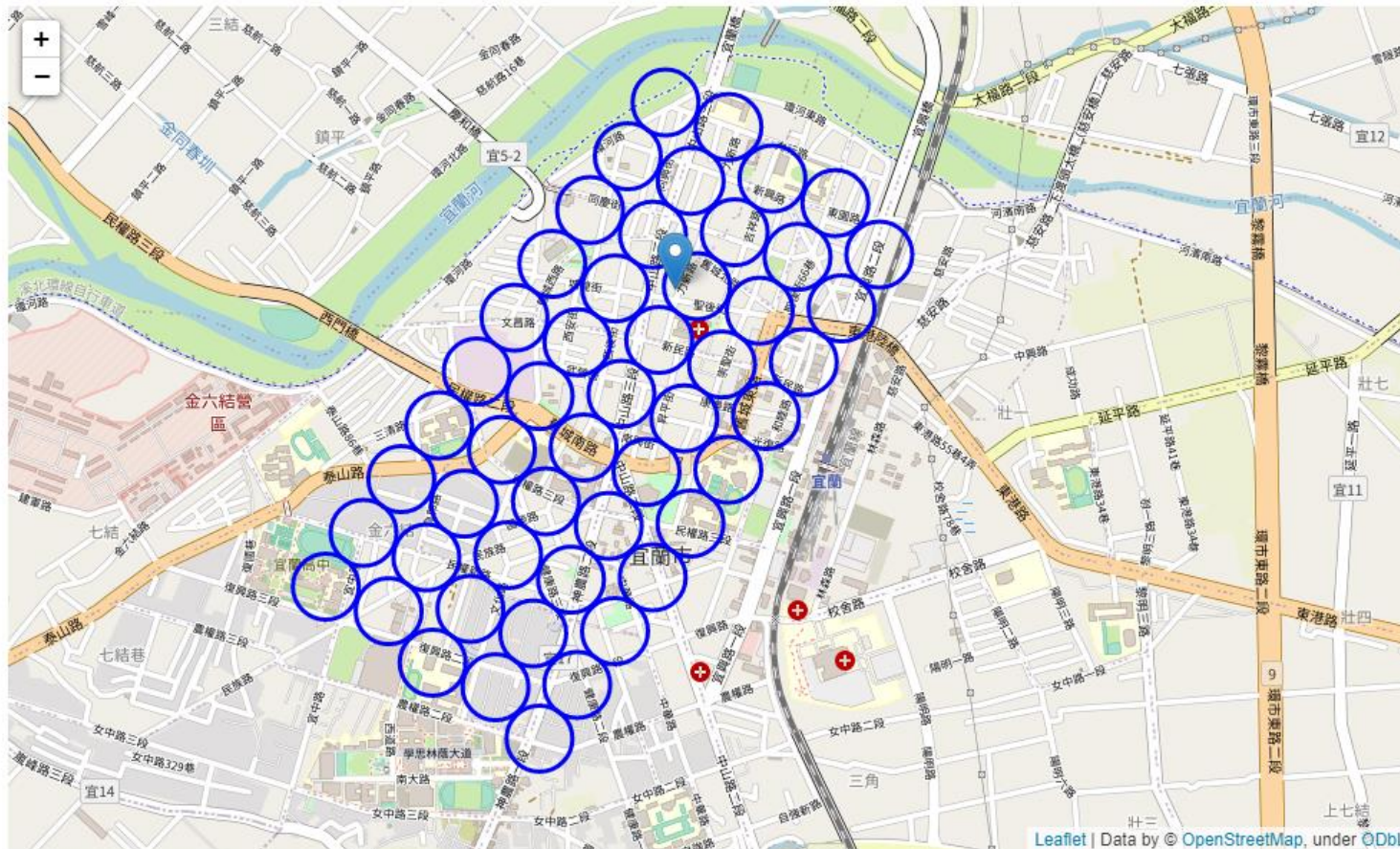
Data

- Two factors influence the location:
 - Number of existing convenience stores in the neighborhood.
 - Number of and distance to convenience stores in the neighborhood.

API

- Two API use in this project :
 - Foursquare API: to find convenience stores.
 - Google API: reverse geolocalisation.

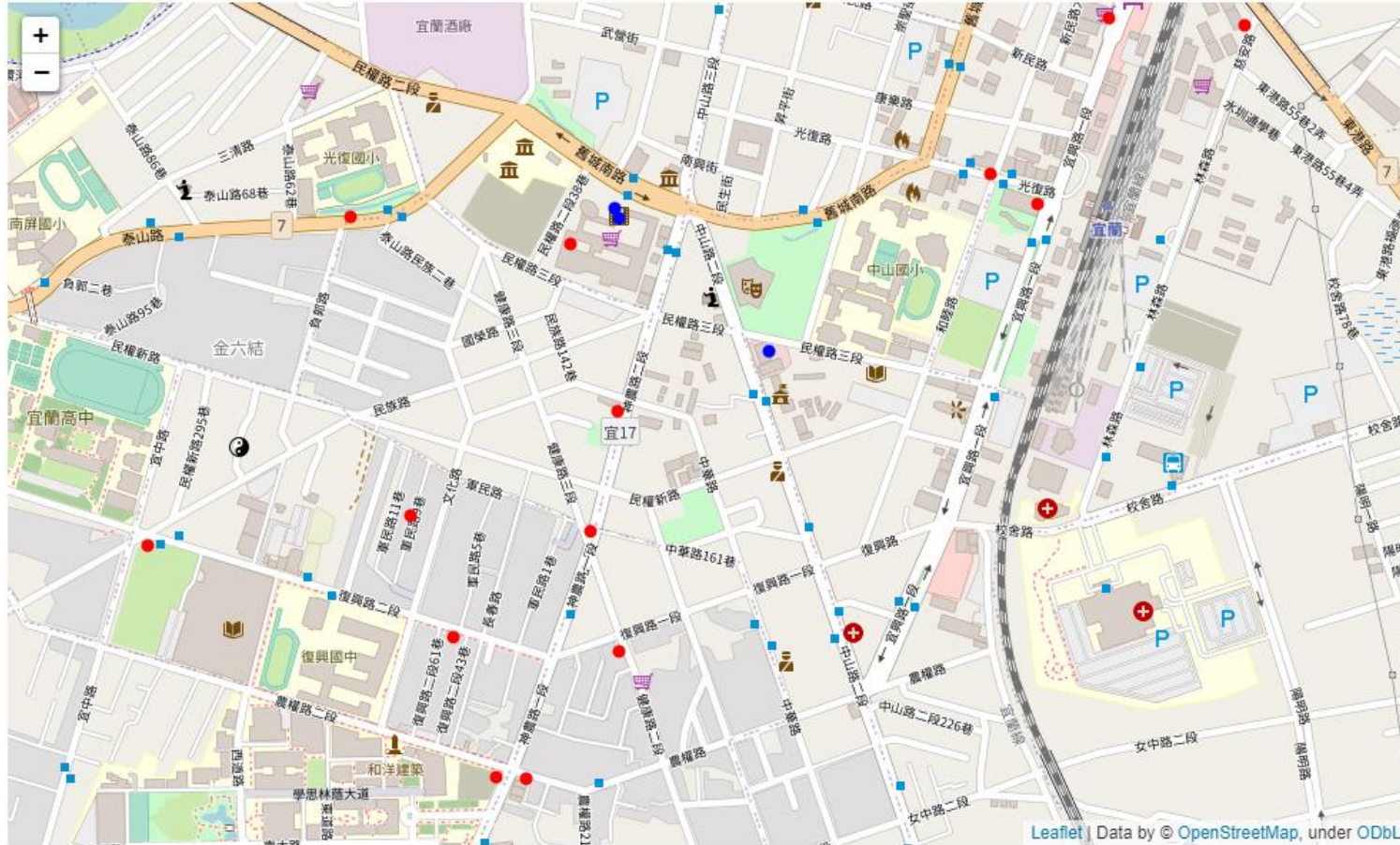
Visualize city center location and candidate neighborhood centers



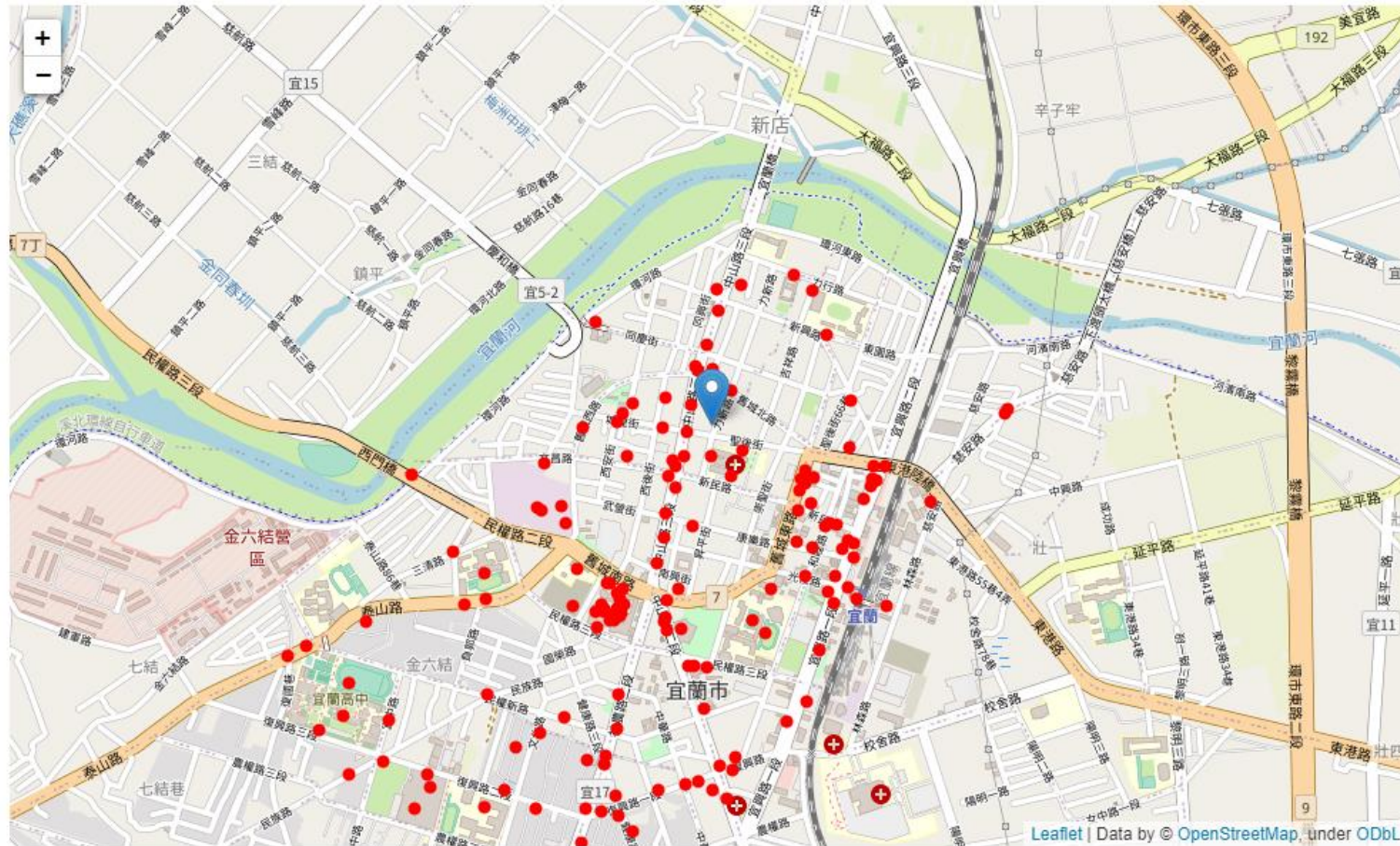
Methodology

- Get data from foursquare.
 - Competitors data in those location.
 - Customers data ins those location.
- Use K mean clustering to get most important location candidates.
- Use threshold to get which location is proper.
 - Number of competitors.
 - Number of customers.

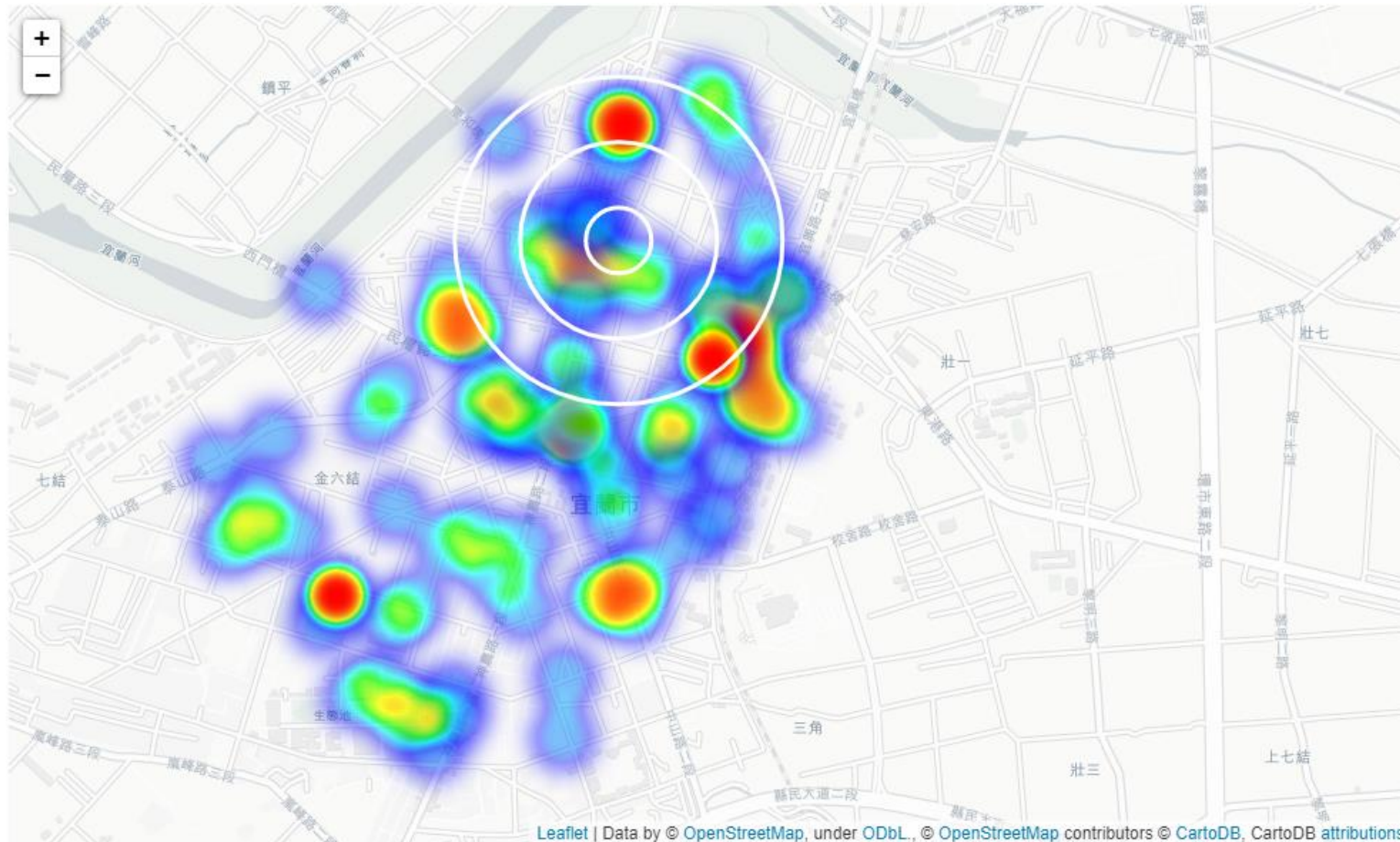
See all potential competitors



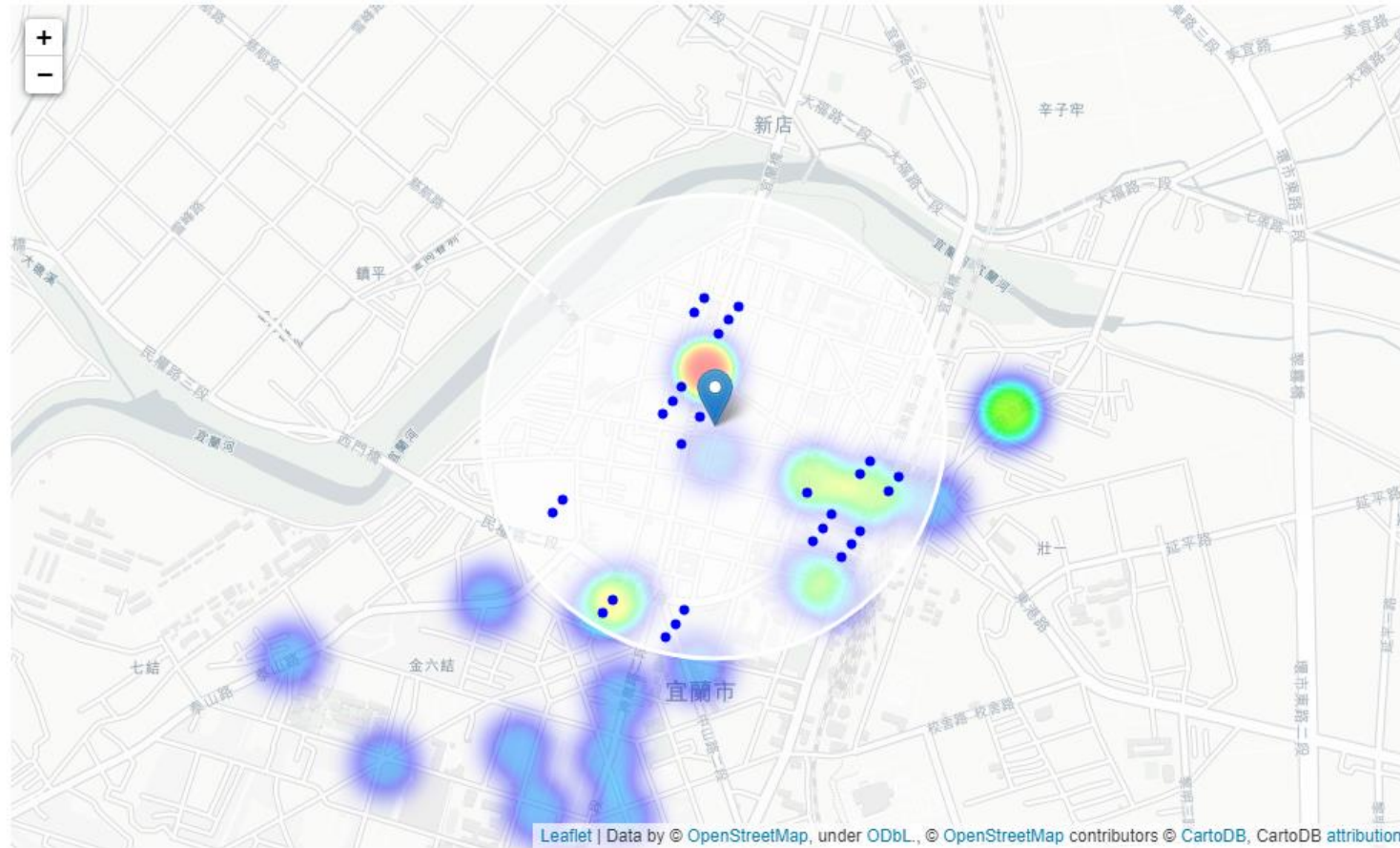
See all potential customers



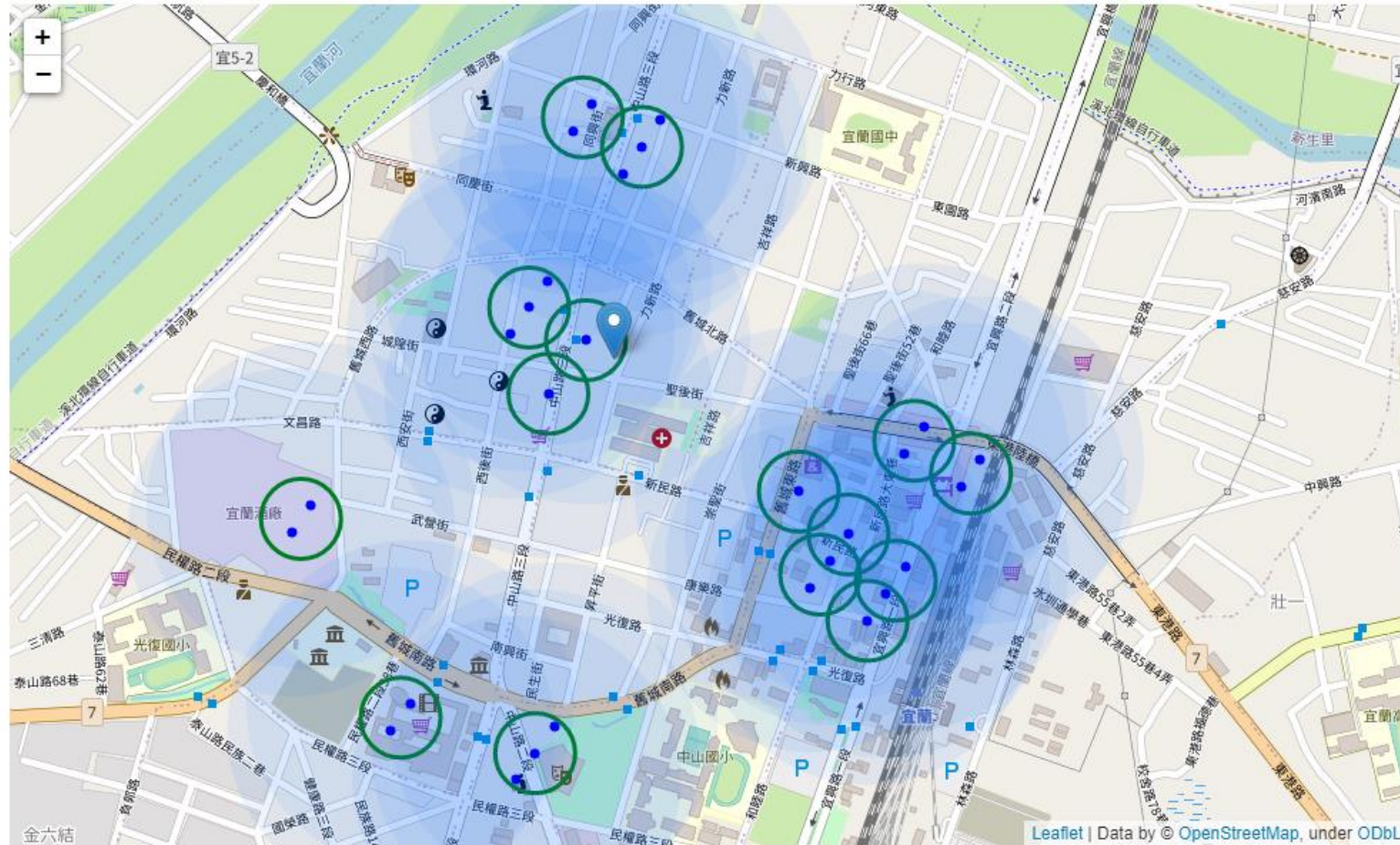
Use heatmap to show density of potential customers



Use threshold to filter location and show proper location



Use K mean clustering to get most important location candidates



Result – list of recommended location

No. 38巷2號, Section 2, Minquan Road, Yilan City, Yilan County, Taiwan 260 => 1.3km from Prefecture
No. 19, Shenghou Street, Yilan City, Yilan County, Taiwan 260 => 1.0km from Prefecture
No. 116, Xihou Street, Yilan City, Yilan County, Taiwan 260 => 0.3km from Prefecture
No. 274號, Section 3, Zhongshan Road, Yilan City, Yilan County, Taiwan 260 => 0.7km from Prefecture
No. 45, Hemu Road, Yilan City, Yilan County, Taiwan 260 => 0.9km from Prefecture
No. 3, Jiucheng West Road, Yilan City, Yilan County, Taiwan 260 => 1.1km from Prefecture
No. 516號, Section 2, Zhongshan Road, Yilan City, Yilan County, Taiwan 260 => 1.2km from Prefecture
No. 366, Section 1, Yixing Road, Yilan City, Yilan County, Taiwan 260 => 1.2km from Prefecture
No. 255, Section 1, Yixing Road, Yilan City, Yilan County, Taiwan 260 => 1.1km from Prefecture
No. 69, Tongxing St, Yilan City, Yilan County, Taiwan 260 => 0.7km from Prefecture
No. 160, Section 3, Zhongshan Road, Yilan City, Yilan County, Taiwan 260 => 0.1km from Prefecture
No. 34, Jiucheng East Road, Yilan City, Yilan County, Taiwan 260 => 0.7km from Prefecture
No. 125, Section 3, Zhongshan Road, Yilan City, Yilan County, Taiwan 260 => 0.2km from Prefecture
No. 42之1號, Xinmin Rd, Yilan City, Yilan County, Taiwan 260 => 0.9km from Prefecture
No. 5號, Kangle Road, Yilan City, Yilan County, Taiwan 260 => 1.1km from Prefecture

Conclusion and future directions

- Built useful method to get proper location.
- Include more potential competitors customers.
- Include more potential customers.
- Try it in other country.