Choosing the best spot to open a Pizzeria in Paris

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Introduction

Where to open the new restaurant ?

According to the marketing department, we have to respect two conditions:

- **Condition 1:** At least 3 competitors in a distance of less than 1 km

- **Conditions 2:** It has to be a neighborhood where competitors have the lowest review rate

Data acquisition

- Data source: Foursquare

- Data cleaning: we just keep the data we need

- Data format: Name, latitude, longitude, ID, note.

Methodology

Machine learning clustering to find 6 districts as potential candidates
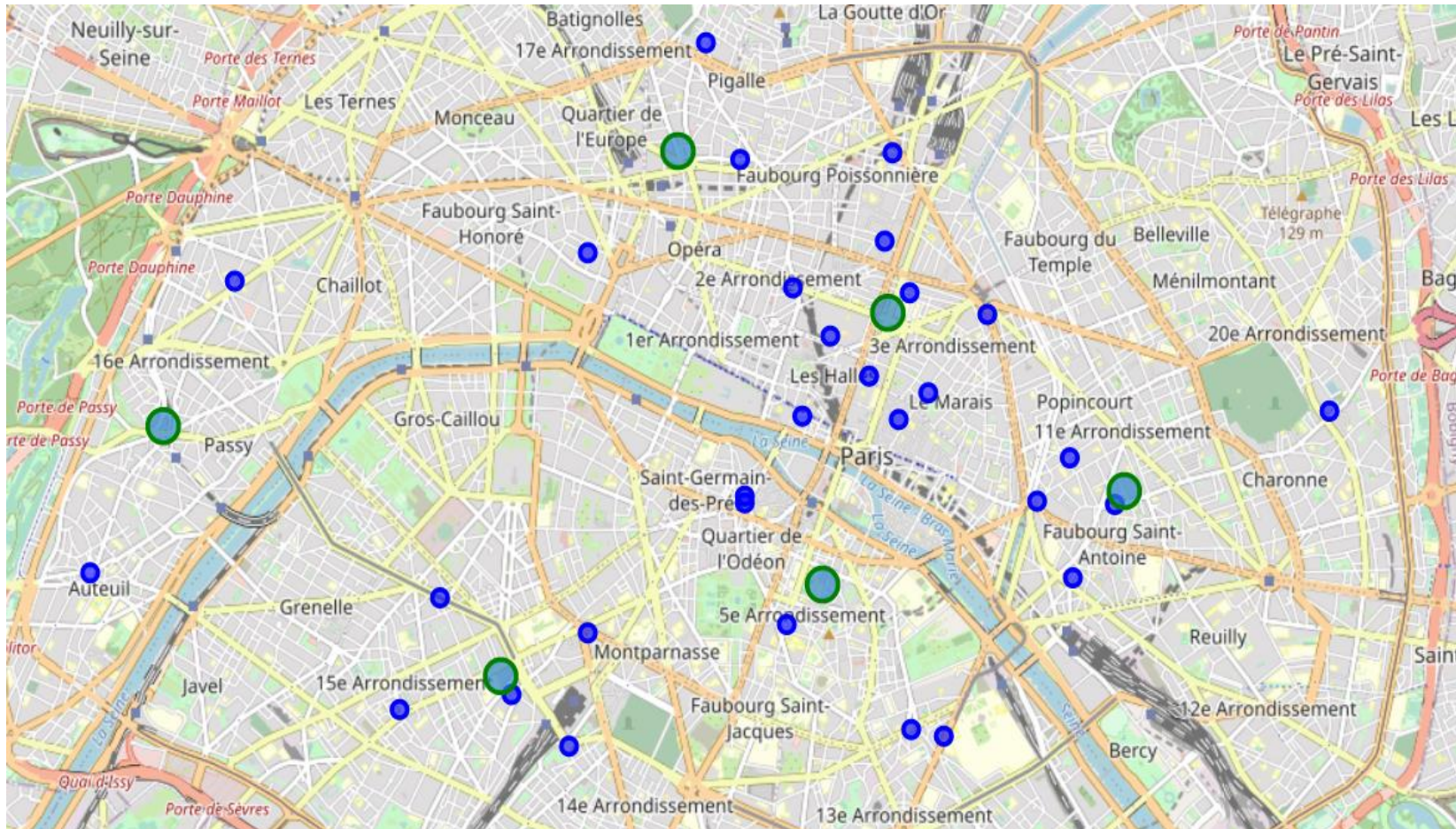
Methodology

Use of Haversine formula to identify number of neighboring restaurants

District	Latitude district	Longitude district	Number of neighbours
District 1	48.866423	2.353877	8
District 2	48.858683	2.273793	0
District 3	48.848025	2.346564	3
District 4	48.841777	2.311150	5
District 5	48.854361	2.379942	4
District 6	48.877318	2.330605	2

District 2 and district 6 have less than 3 restaurants
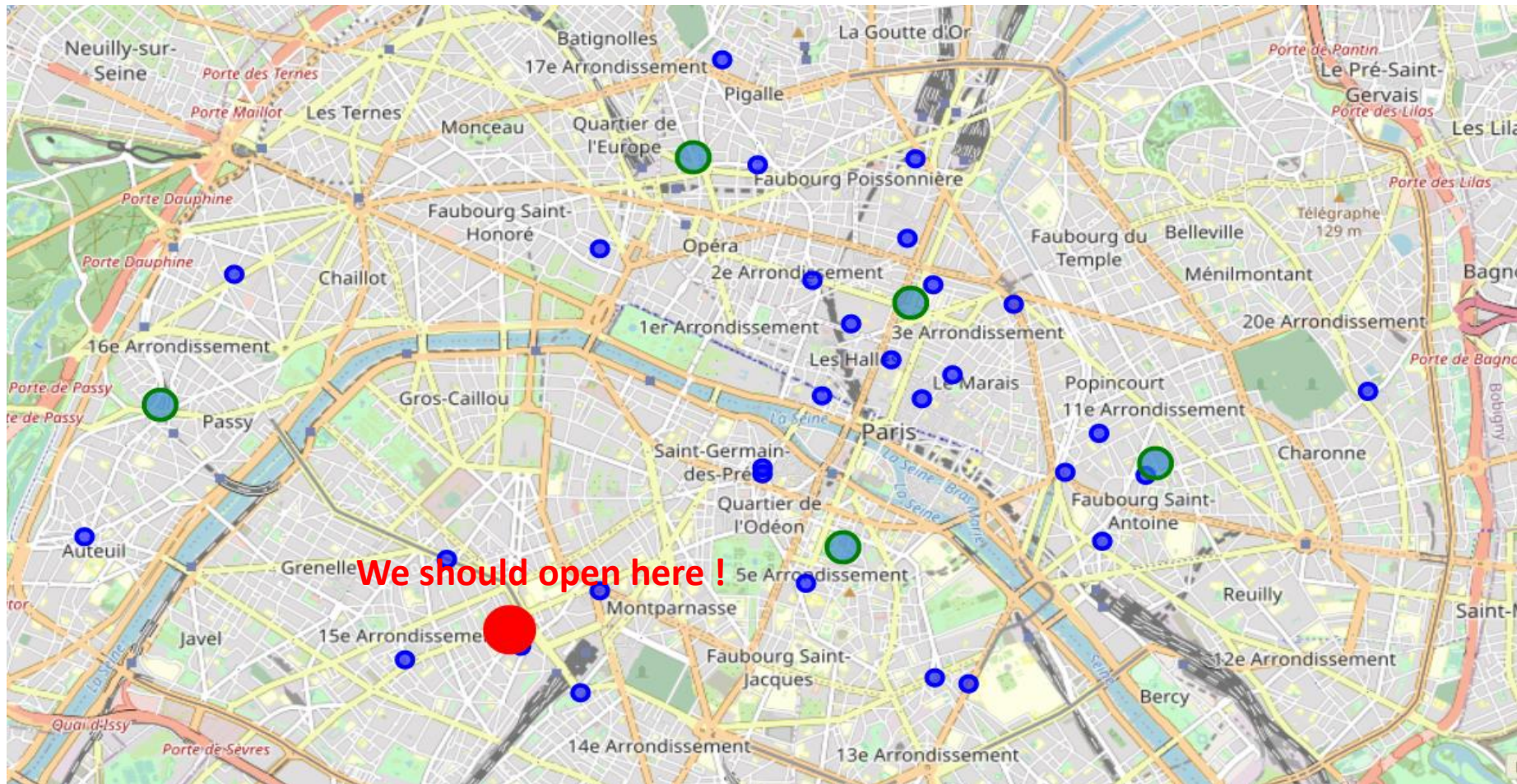
Methodology

We calculate the review rate for each district

District	Average note
District 1	7.900000
District 3	7.300000
District 4	6.500000
District 5	7.366667

District 4 has the lowest rate

Result

The best spot has been identified in the map

Result

The sport is in the 14ᵗʰ arrondissement of Paris

Conclusion

The best spot to open a pizzeria in Paris respecting the conditions given by the marketing department (i.e. more than 3 restaurants in less than 1 km distance and lowest reviews in the neighborhood) is in the 14th arrondissement of Paris.