IBM Data Science Professional Certificate

Applied Data Science Capstone

Evaluation of the environmental quality of a borough

Case study with the city of Paris, France

F.MARTIN - April 2020

INTRODUCTION

- **How to make an indicator of « environmental well-being » to help people who are looking for housing to evaluate their district ?**

→ Access to different facilities

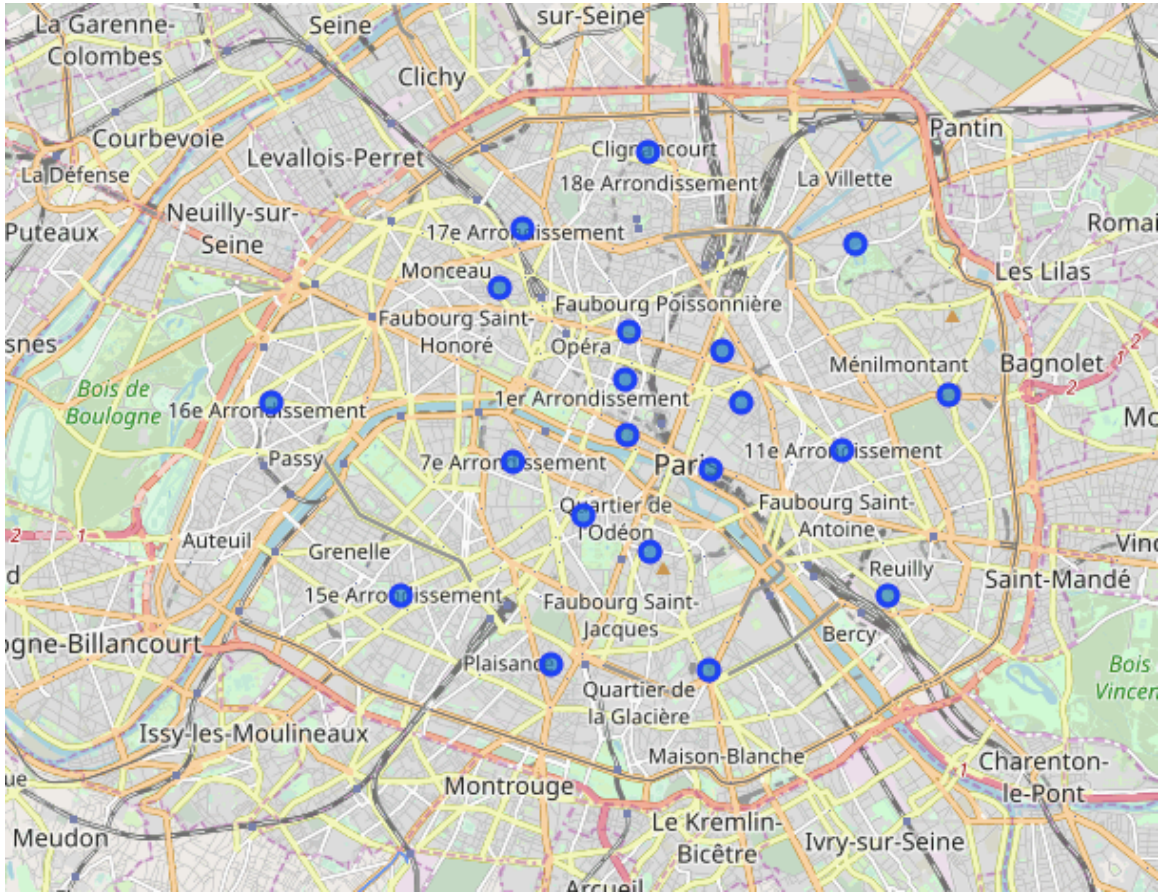
DATA

Venues on FourSquare :

- Gardens (4bf58dd8d48988d15a941735)
- Bathing areas (52e81612bcbc57f1066b7a28)
- Fountains (56aa371be4b08b9a8d573547)
- Pedestrian areas (52e81612bcbc57f1066b7a25)
- Bike trails (56aa371be4b08b9a8d57355e)

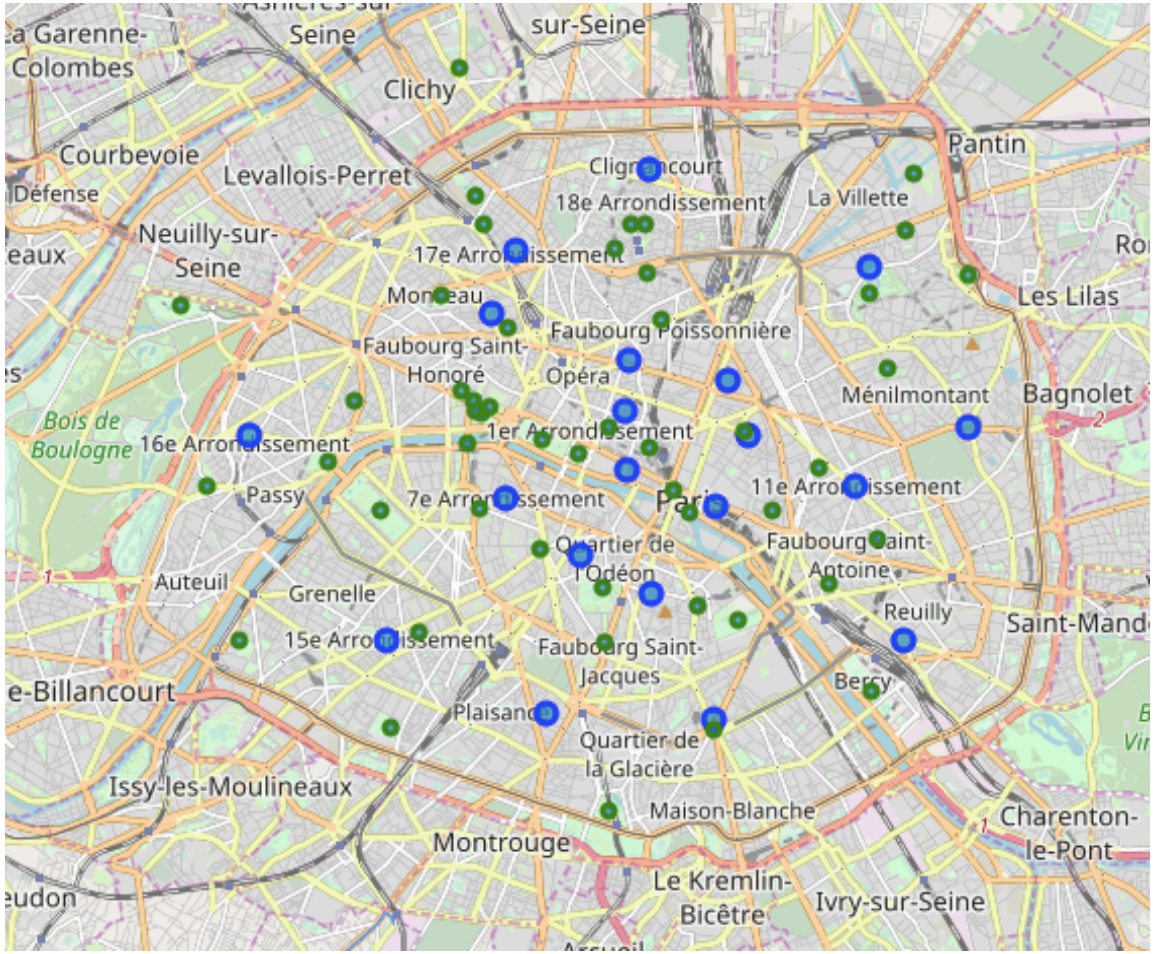
METHODOLOGY

- Getting the location of the boroughs



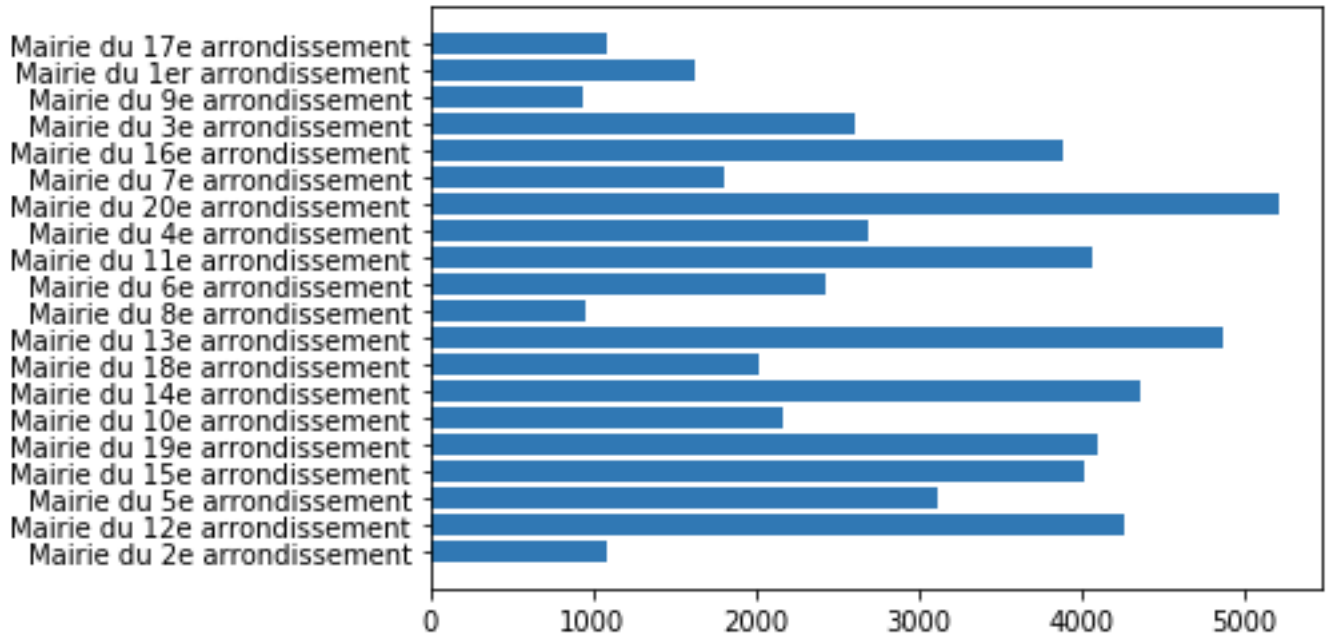
METHODOLOGY

- Exploring the parks of Paris.



METHODOLOGY

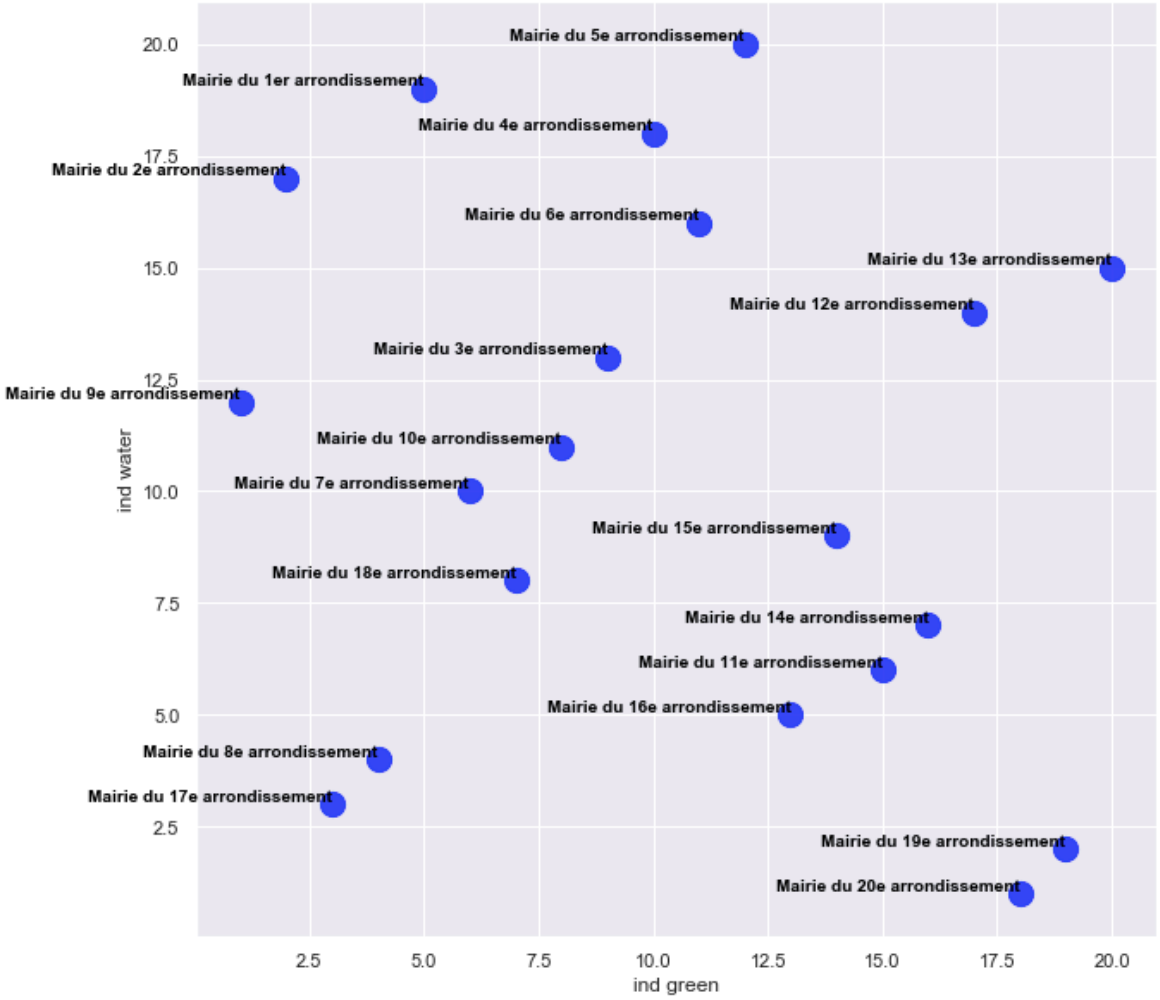
- Testing indicators : Absolute indicator



→ Global ranking

METHODOLOGY

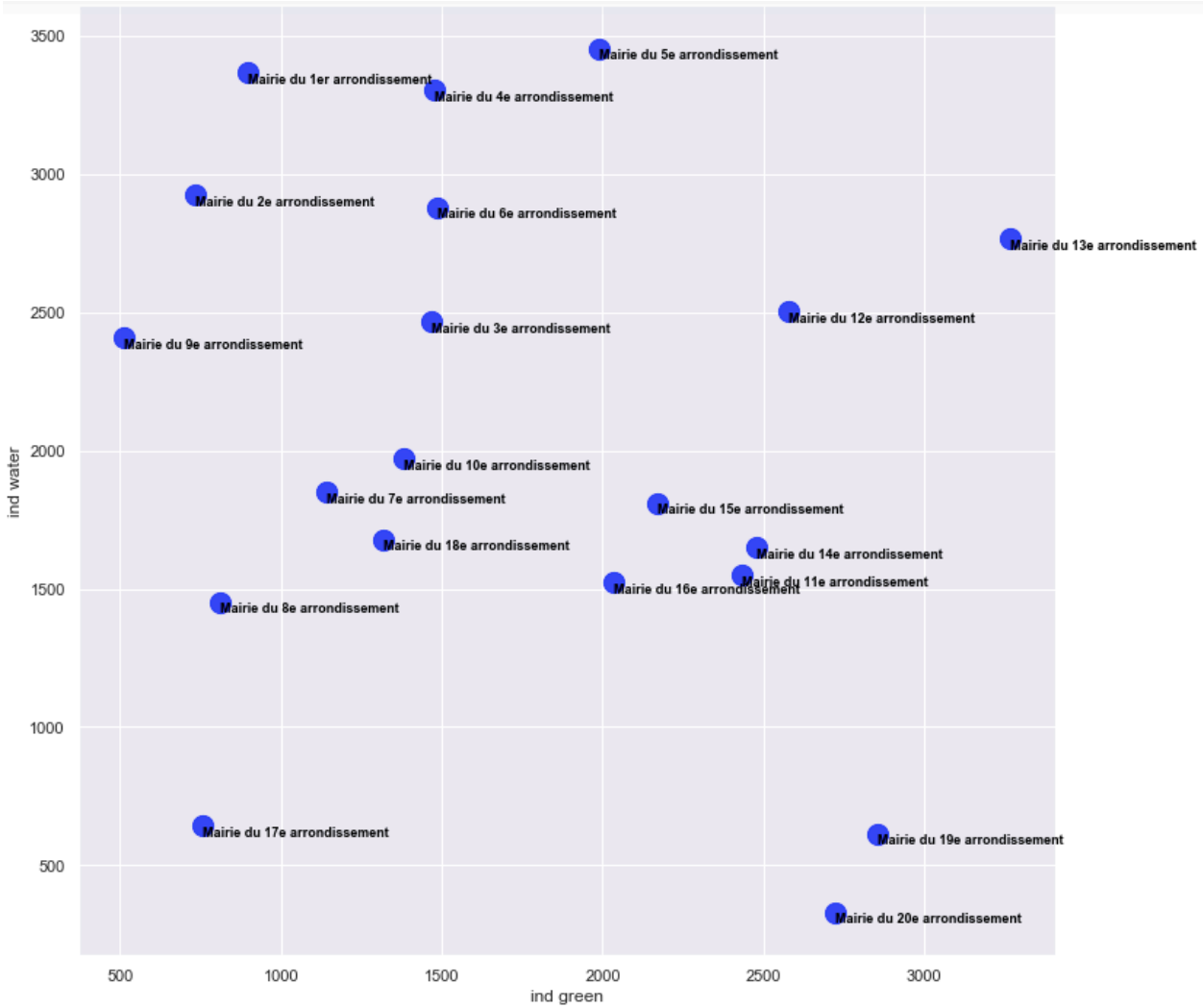
- Testing indicators : Relative indicator 1



→ Relative ranking but could be more precise

METHODOLOGY

- Testing indicators : Relative indicator 2



→ Better relative ranking

METHODOLOGY

- Classification

→ K-means
→ Four clusters

RESULTS

- Best boroughs :
- 17ème arrondissement, 8ème arrondissement, 18ème arrondissement, 7ème arrondissement, 10ème arrondissement, 9ème arrondissement.
- Good on green :
- 1ème arrondissement, 2ème arrondissement, 3ème arrondissement, 4ème arrondissement, 5ème arrondissement, 6ème arrondissement
- Good on water:
- 19ème arrondissement, 20ème arrondissement
- To avoid:
- 11ème arrondissement, 12ème arrondissement, 13ème arrondissement, 14ème arrondissement, 15ème arrondissement, 16ème arrondissement
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