Battle of the Neighbourhoods - Holiday Destinations

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- **Description of the problem:**
- Last year when we went on holiday to Devon for the 4th year running, we went to the beach and my wife, who's never that enthusiastic about beach trips, came along with us. We built our sand castle while Mrs D sat down and started to read her book. As the wind was blowing and we'd bought a kite, we boys went off and flew it and were off across the beach having fun. When we got back we couldn't find Mrs D but there was the remains of our sand castle :(Mrs D turned up soaking wet and explained that the tide had come in and caught her completely unawares and that she and her soggy book were going back to the holiday cottage right now. So all future holidays, she says, will be city breaks.

Analysis Saves the day

This project will search potential holiday destinations and score them for desirability based on the requirements of all of the family. I will be searching for the top 100 attractions from centroid location in a city and assigning each a score. This will give a better understanding of what is on offer within walking distance of each centre and enable me to make a case ~~that there really isn't anything there for children and that we should go to the sea-side instead~~ for a fairer choice of holiday destination

Methodology

First we'll identify 3 holiday destination coordinates using Geopy and our original tried and tested holiday destination, Devon, for comparison purposes

We've chosen city breaks to analyse with a short flight from our home (marked with a house symbol):

Paris, Copenhagen and Amsterdam

Methodology cont.

- I'm next going to use coordinates for the cities in a Foursquare query to find venues, restricted to holiday attractions, and display these with appropriate markers onto a map.
- Then determine scores for each of these categories for the the family and put these into a DataFrame
- Combining the data from FourSquare and the scores from the family, calculate the desirability of the 4 holiday destinations: Devon (control), Paris, Copenhagen and Amsterdam.
- Then use analysis to ensure that the family will enjoy the holiday is similar enough to previous year’s Devon holidays

Comparison 1 – Average Venue Scores

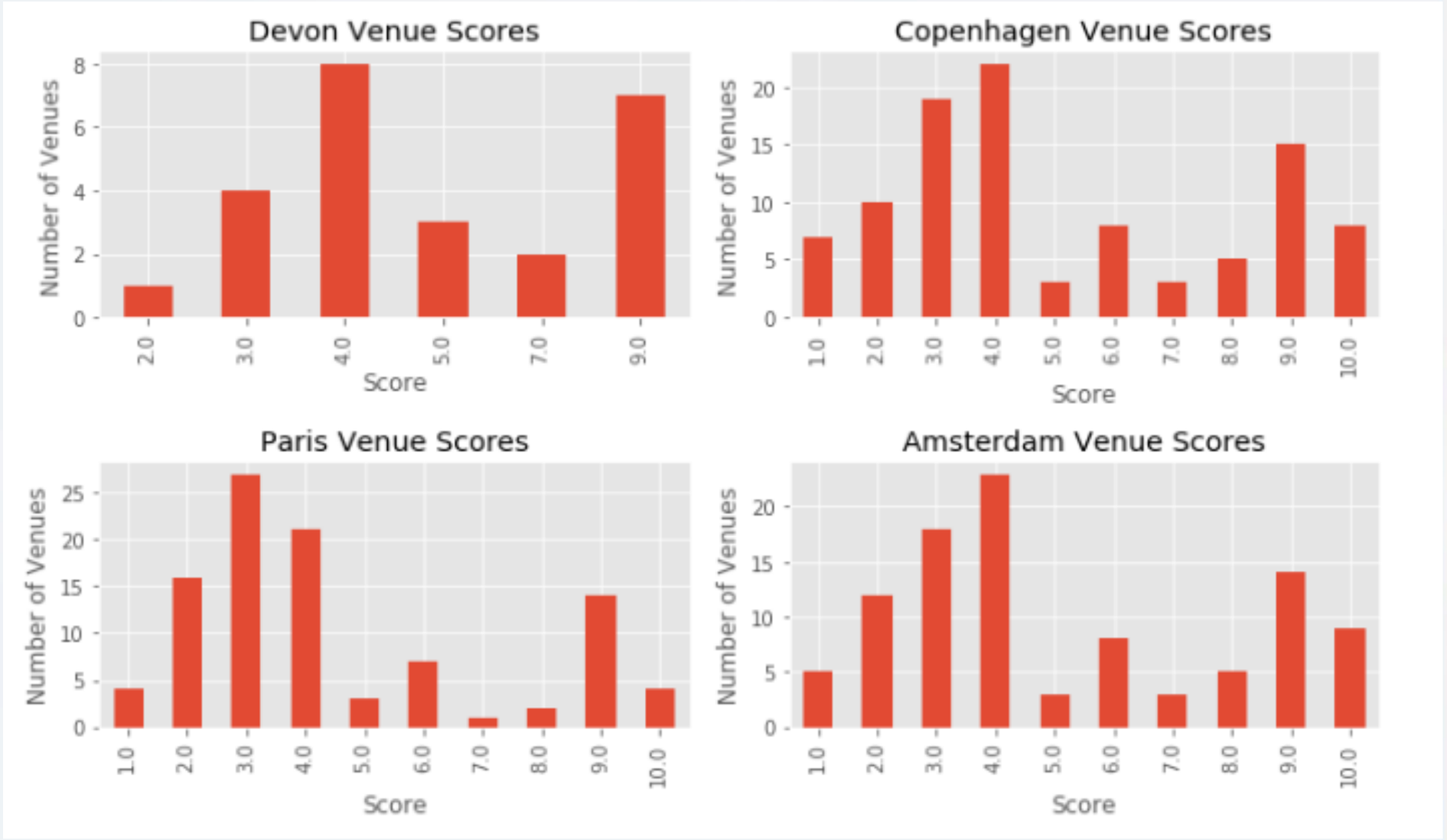
Destination	Number of Venues	Average Score
Devon	25	5.52
Copenhagen	100	5.11
Amsterdam	100	5.15
Paris	100	4.50

First insight is there are a lot more venues to explore within city centres than out in Devon so potentially more to do.

Devon scores the highest but that was to be expected given our existing holiday expectations

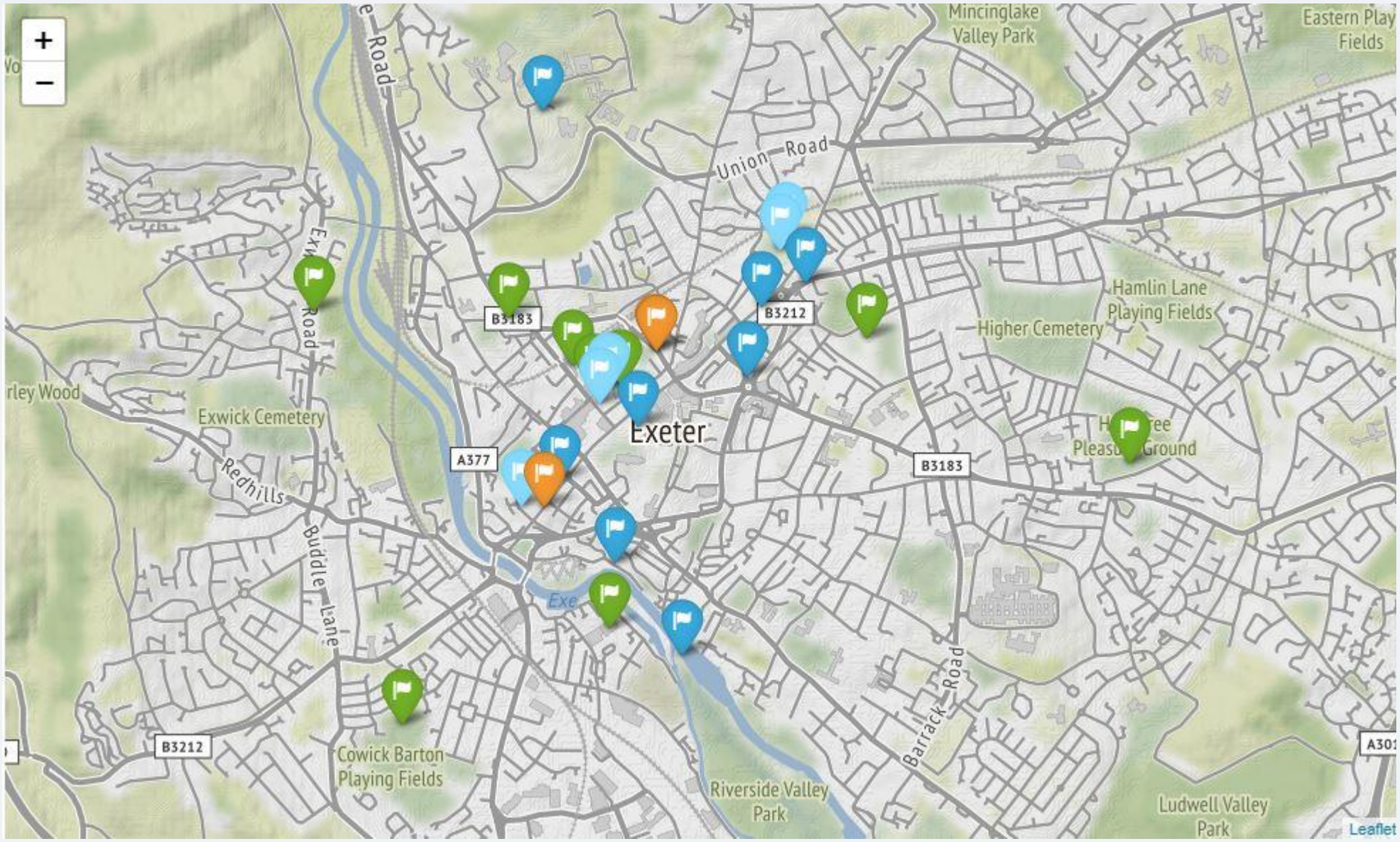
Comparison 2 – Venue Score Frequencies

- First thing to note is the how similar the make up of each city is.
- Copenhagen edges it on the number of 9s and 10s



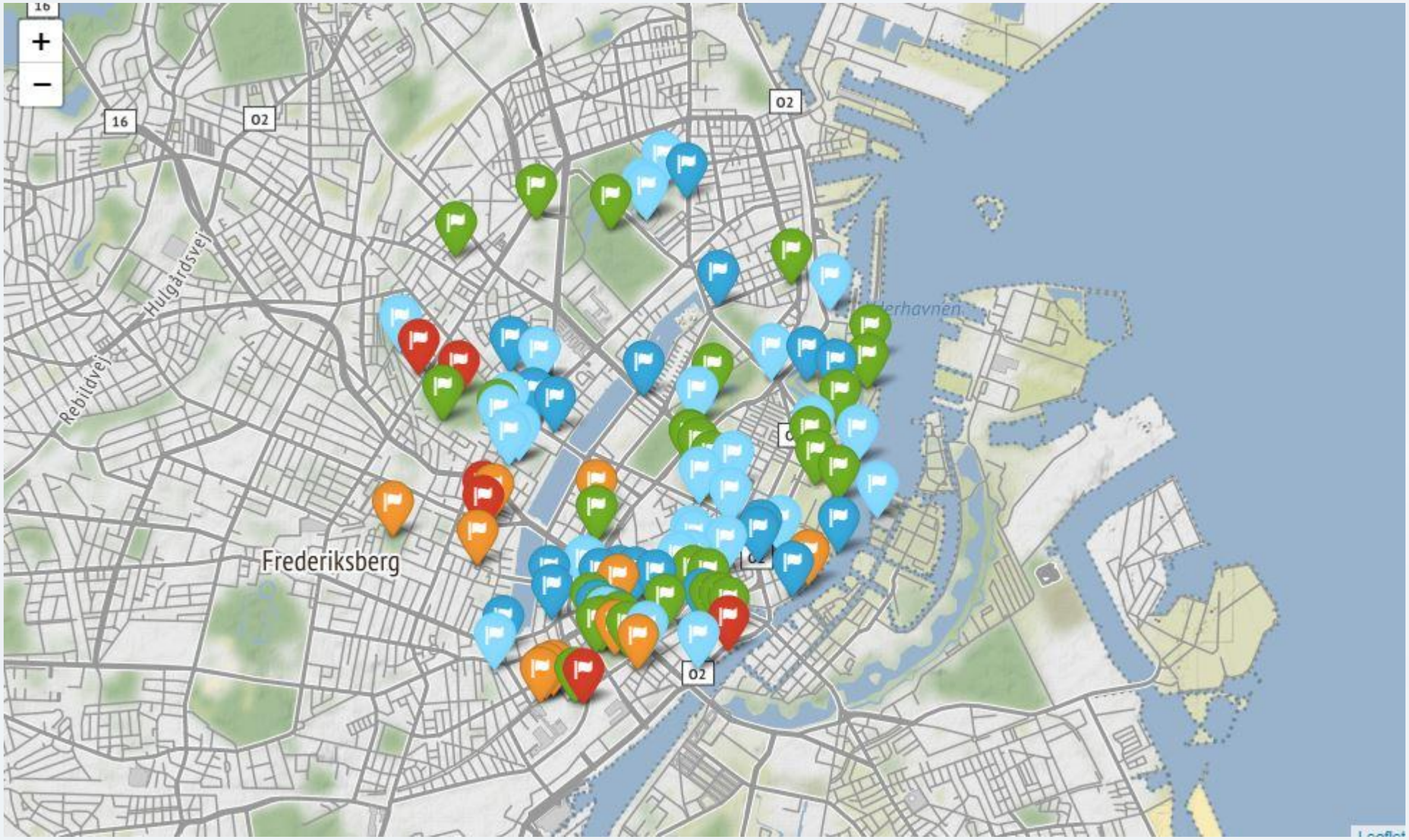
Comparison 3 – Attractive Venue Proximity

Devon



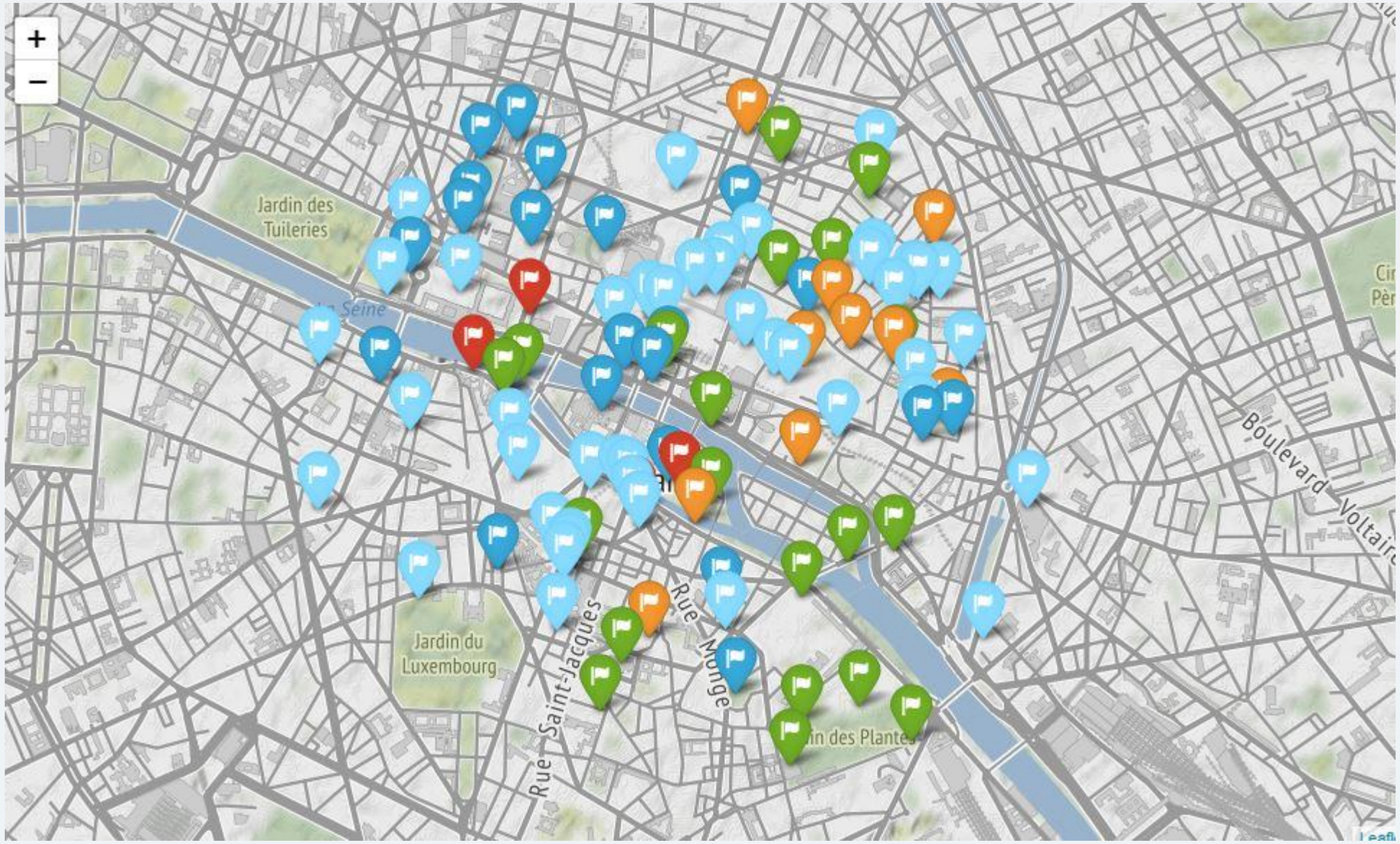
Comparison 3 – Attractive Venue Proximity

Copenhagen



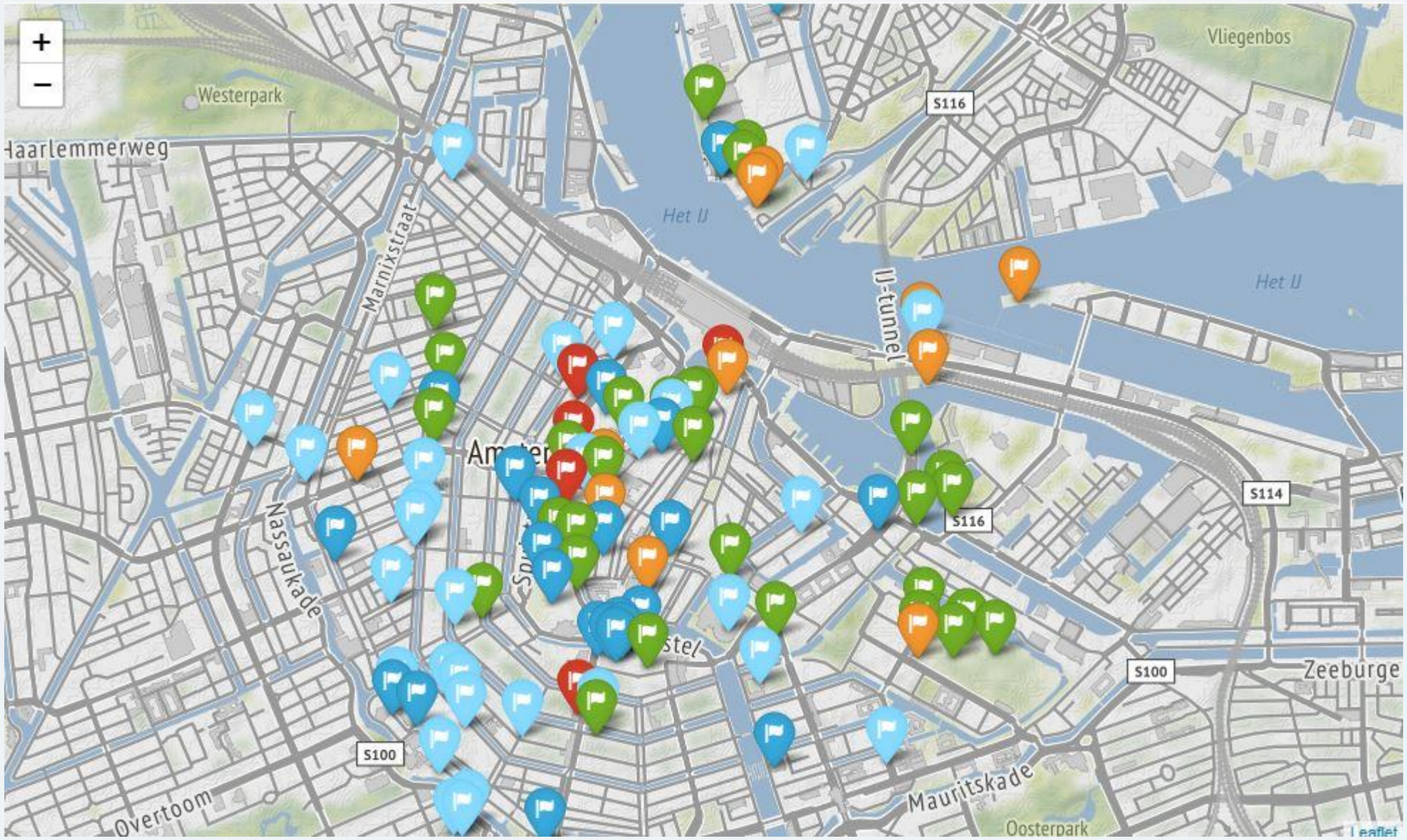
Comparison 3 – Attractive Venue Proximity

Paris



Comparison 3 – Attractive Venue Proximity

Amsterdam



Comparison 4 – Venue Make Up by Destination

Devon	
Venue	Frequency %
Park	20%
Soccer Stadium	8%
Bar	8%
Theater	8%
Historic Site	8%

Copenhagen	
Venue	Frequency %
Museum	13%
Theater	10%
Music Venue	7%
Art Gallery	6%
Art Museum	5%

Paris	
Venue	Frequency %
Art Gallery	17%
Historic Site	14%
Indie Movie Theater	9%
Art Museum	8%
Park	7%

Amsterdam	
Venue	Frequency %
Museum	13%
Art Gallery	9%
Art Museum	7%
Theater	7%
Movie Theater	5%

Conclusions

- Using the above analysis, I have discovered that all of the cities I've chosen do answer to some of our holiday requirements. Devon, naturally come out top on average score and this was highlighted by the high frequencies of parks - which are a big favourite for our boys.
- Copenhagen also scored highly in the same ways. Parks are very prevalent and it scores highly on average attration ratings.
- So in conclusion, we're going to be planning a holiday to Copenhagen for 2019!

Afterthoughts

- One of the key parts of delivering any analysis to stakeholders is to KNOW YOUR AUDIENCE. I could have spent a lot of time building kMeans models and sourcing additional data to support my analysis but given that my wife and children are as far from a technical audience as you can get, there seemed little point.
- This is probably true for the analysis which I am carrying out at work also. Simplicity is key.
- I've focussed on visuals using Python's very user friendly mapping capabilities and plotted some simple charts and that gave me the information I needed to suit my purpose.