Coursera Capstone - The Battle of the Neighbourhoods

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Introduction

Barcelona is a city with a lot of contrasts, from a gothic centre, to modern, highrise beach living, and everything in between.
One of the things that has really marked out the city recently is large changes in the property prices, with some neighbourhoods nearby one another having very different property prices.

Business problem

The objective of the capstone project is to identify through data if there are types of venues that correlate with higher or lower property prices.
The more visibility we have into the property market, the better we will be able to make choices related to purchasing properties.

Target audience of this project

This project is designed to be useful to property investors in Barcelona, or Spain in general. It will also potentially be of interest to highlight the types of venues that correlate with higher and lower price areas to help better understand social trends.

Data
To solve this problem, we will need to access the following data sources:
- A list of all the neighbourhoods in Barcelona, including boundary and lat/lng data to be able to perform the geospatial analysis
- A list of average property prices per square meter for all of the neighbourhoods - this is to allow us to tell higher value from lower value neighbourhoods
- Venue data across the city - to allow us to see the type of venues and their location

Sources of data:

Barcelona city council has an open data policy, and we are able to access this for the first two data sources above with a list of (sub)neighbourhoods, and a list of avg property prices in 2015.
By accessing Foursquare's API, we can get venue data in a programmatic way for the whole of the city.