

# Do you want to open a new gym in Manhattan?

**This post will help you to identify the best  
neighbourhood where to start your new business**

# Use Case Explanation

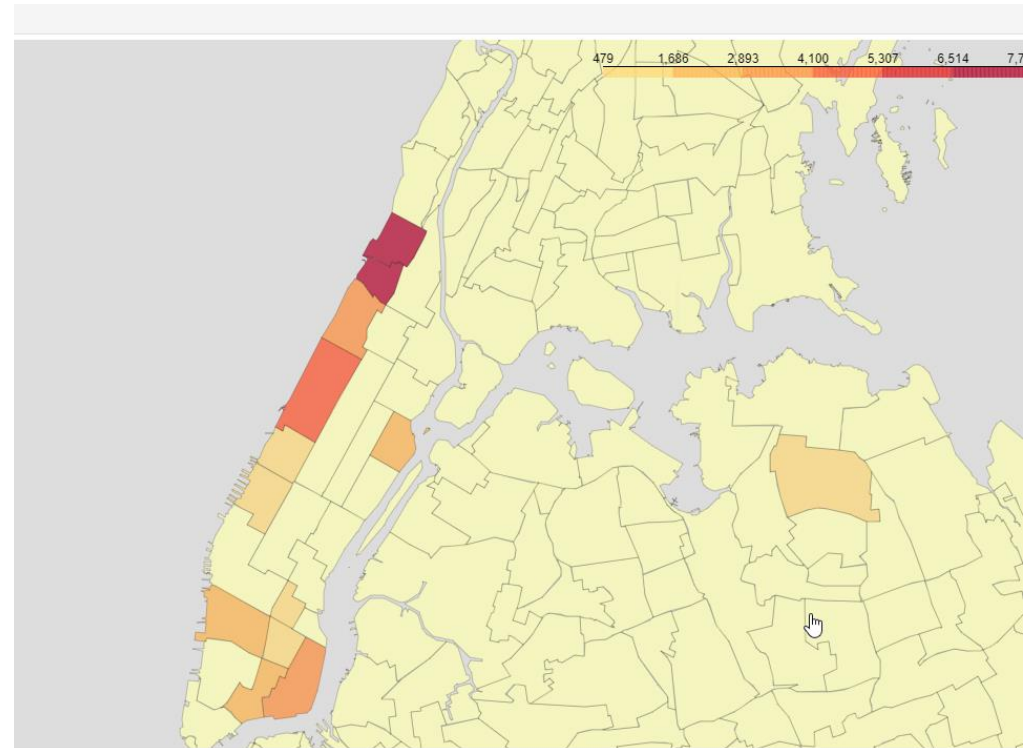
- In this exercise I am going to analyse how gyms are distributed in different Manhattan's neighbourhoods.
- The goal of this analysis is to help people who are interested in opening a new gym in Manhattan to identify the best location by providing information of what are the lowest served areas in terms of gym presence in conjunction with population density and neighbourhood classification.
- Outcome will be a choropleth map showing the gym penetration index on each neighbourhood and on top of that circle markers for each neighbourhood clustered by different colours and labels.

# Data

- Information of New York's boroughs and neighbourhoods  
[https://geo.nyu.edu/catalog/nyu\\_2451\\_34572](https://geo.nyu.edu/catalog/nyu_2451_34572)
- population of each neighbourhood from  
<https://opendata.cityofnewyork.us/>
- Last piece of data I need is the perimetral area of the neighbourhoods (geojson) that can be found also here <https://opendata.cityofnewyork.us/>

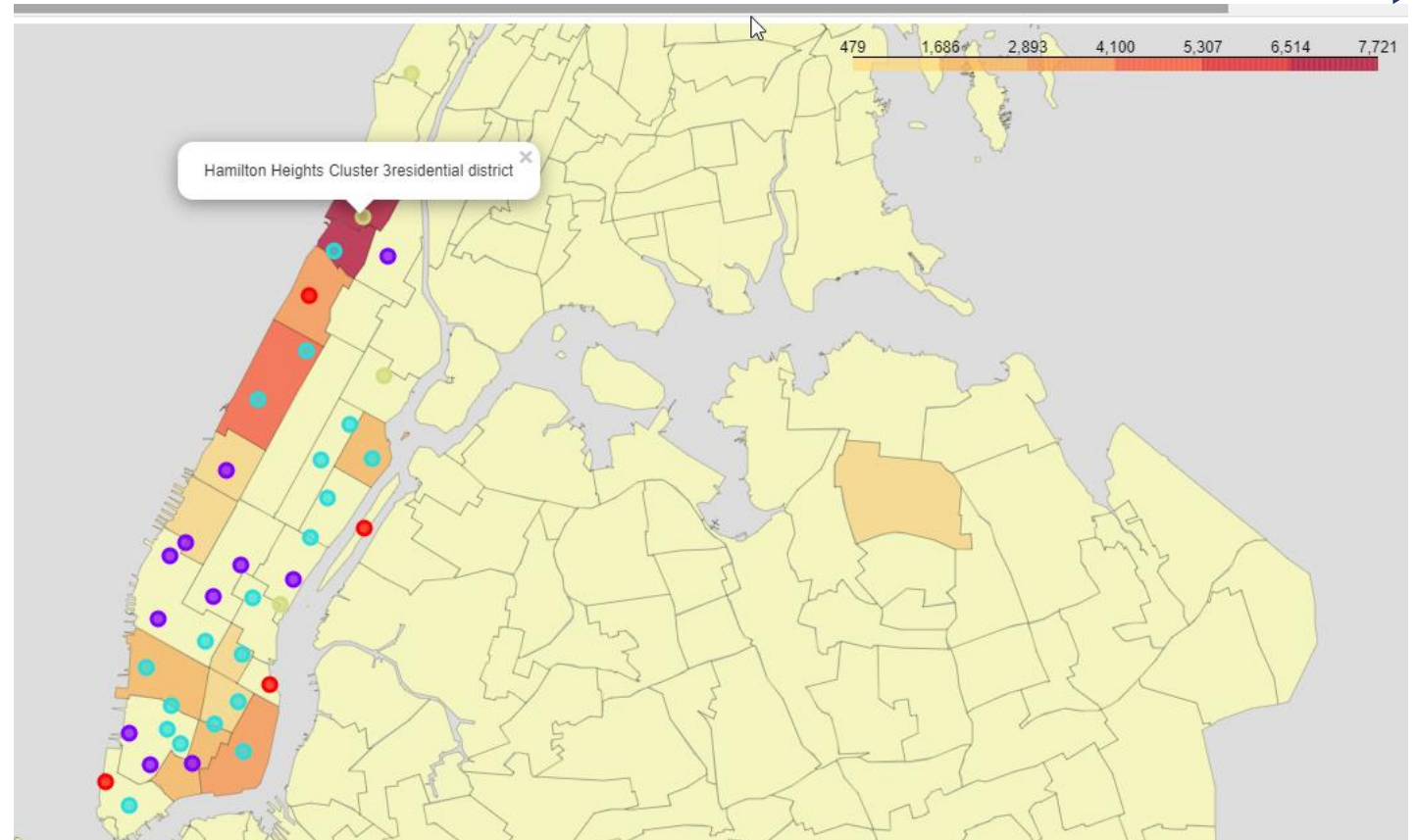
# Execution

- Use Foursquare to identify number of gym per neighbourhood, then create the KPI gym presence by using the neighbourhood population and divide it by number of gym for that neighbourhood. Use this KPI to create a choropleth map.
- Stronger the colour, lower the gym penetration, meaning potential neighbourhood candidate



# Execution

- Combine this date with neighbourhood clustered by similarity and show main characteristics



# Results

- From the choropleth map we can see that the area with the highest ratio people / gym, meaning the lowest served area in terms of gym per persons, are mainly located in the west side of Manhattan or in Downtown.
- On top of this information we also have the main characteristic of the neighbourhood, that will help us to choose the best location based on the type of gym we are interested to open:
- If we are looking to open a gym in a financial/trendy/touristic district then the potential neighbourhood, sorted by lower gym presence are:
  - - Upper West Side
  - - Manhattan Valley
  - - West Village
- If we want to open a gym in an artistic / multicultural district then we should go for:
  - - Lincoln Square
  - - Clinton
- If we want to open a gym in a residential district then:
  - - Hamilton Heights