

## **Introduction**

For this project I am creating a hypothetical client which is interested in opening a bar in the city of Bristol. In order to his business become successful or even a void failure at first, it is important to know the most suitable location to start such business. Areas with the highest concentration of bars might indicate the perfect spot as people might commute to such locations looking for those environments.

## **Business Problem**

The question to answer is: Which is the most suitable location in Bristol to invest in a Bar? Well with the help of unsupervised machine learning algorithm known as k- mean clustering, we will try to answer this question and provide suggestions to our client regarding the best location.

## **Target Audience**

The client who wants the most suitable location to open his bar.

## **Data**

The data bellow was used to solve this problem:

1. A list of neighbourhoods in Bristol with its corresponding coordinates.
2. List of all venue existent in each neighbourhood, this data will be fetched from foursquare API.

## **Source of data**

1. The neighbourhood data was scrapped via Wikipedia:  
[https://en.wikipedia.org/wiki/BS\\_postcode\\_area](https://en.wikipedia.org/wiki/BS_postcode_area)
2. Latitude and longitude data were acquired downloaded and filtered according the purpose of this project: <https://www.doogal.co.uk/postcodedownloads.php>
3. Foursquare API was used to get all venues related to each neighbourhood.