# Operation Transformation - Hotel in Dublin

# Intro

- Dublin CIty Council and Tourism Ireland would like to build a new hotel in the North of Dublin
- Historically less developed area of Dublin so promoting tourism there would help the town to prosper
- Malahide, a coastal town was chosen as the area in the North to develop
- The target audience would be tourists by encouraging them to visit this town with a new luxury hotel surrounded by amenities within walking distance as well as being accessible by public transport for ease
- We will determine the best location for this new hotel

# Data

- Foursquare API to determine amenities nearby
- Matplot lib graphs to determine distance of amenities from city centre
- Folium maps to visualized outputs and best location for a new hotel
- Data analysis and clustering by kmeans

# Findings

First we plotted the city centre and any hotels already in the area
- The red dot represents Malahide centre
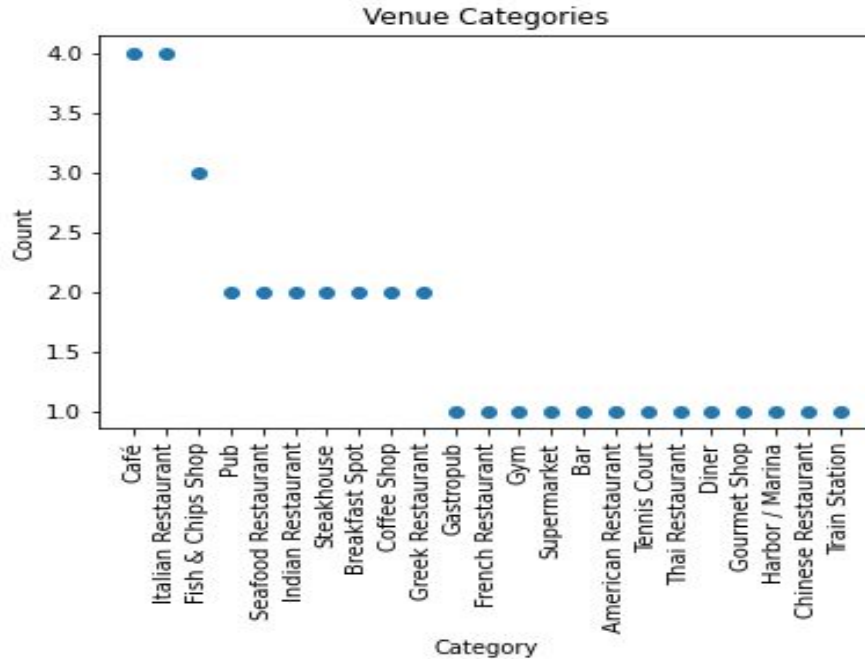- The blue dots represent two hotels in the area
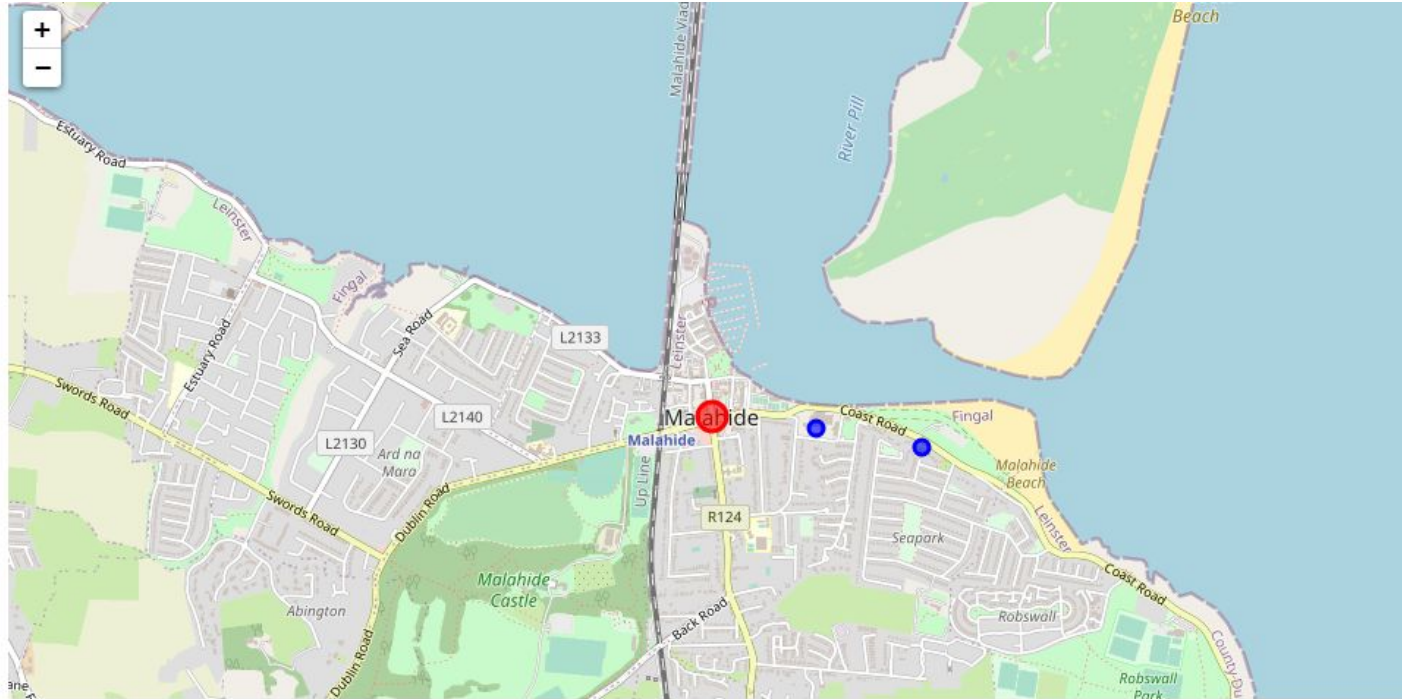
Then we plotted the city centre plus all amenities in the area
- The red dot represents Malahide centre
- The green dots represent amenities in the area such as bars, restaurants, cafes
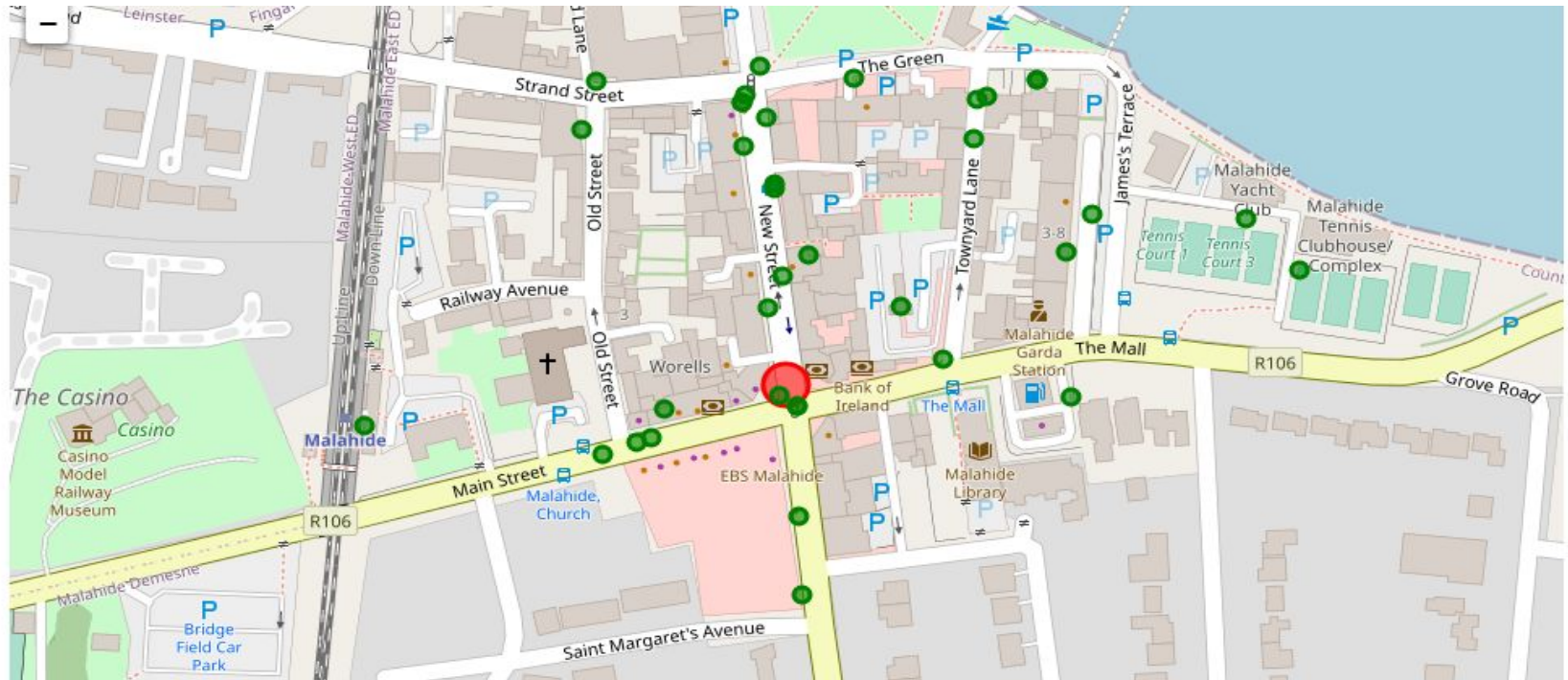
Amenity categories were plotted so we can see that there are mostly cafes, restaurants and pubs in the area but also a Harbour

With our predictions we were able to determine the location in green as the best spot for a new hotel (lat long: 53.45 ,-6.15) closest to all amenities (in black) and further from existing hotels (in blue)
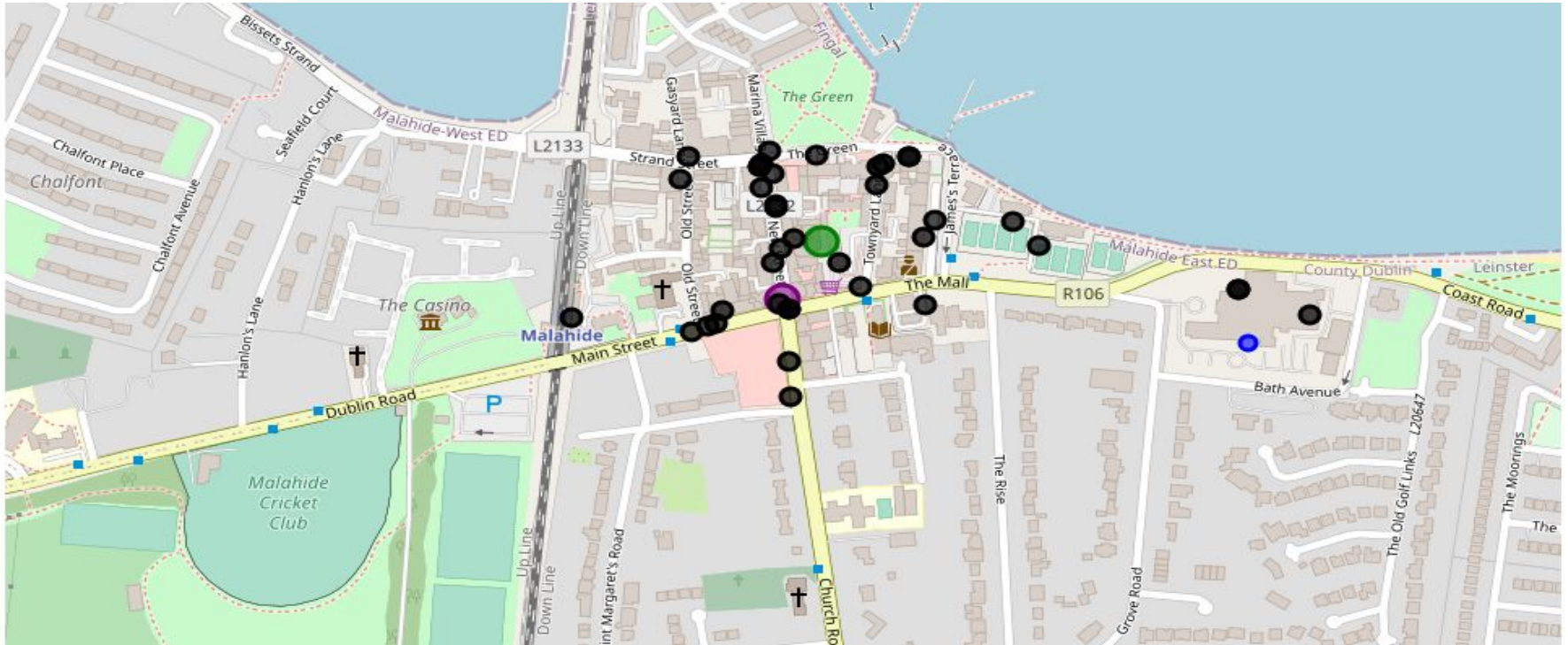
# Discussion

- The main issue was the lack of ratings to determine the best or most popular of the venues/amenities due to the lack of ratings in Foursquare as it is a small town and Google Maps and other platforms are more popular amongst users

# Conclusion

- Our algorithm determined a central location close to many restaurants and bars as well as a supermarket for a prime location for a new hotel including not too far away from a train station making it very accessible to tourists to promote the area and drive revenue to the town