



# Capstone Project

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**Battle of the Neighborhoods**

Exploring Nottingham's housing market  
for students

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# Outline



Introduction



Data



Methodology



Results



Conclusions

# Introduction

- Universities in the UK are among the best worldwide - attracting thousands of students from around the globe per year.
- Focus of this project will be on providing students in the East Midlands, UK.
  - Additional information for their life at university will be created:
    - Housing market
    - Options for entertainment
    - Proximity to university, and public transport (future work).



# Data

The following datasets will be used for our Python project:



## Properties.

We will use the zoopla developer API to obtain data about rentable properties in Nottingham.



## Entertainment.

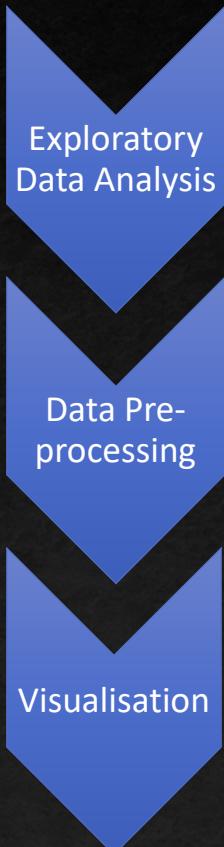
Accessing data through the Foursquare City Guide API will allow retrieving places of interest in Nottingham.



## Map.

Using the Folium library, we can visualise both, the property data and entertainment data.

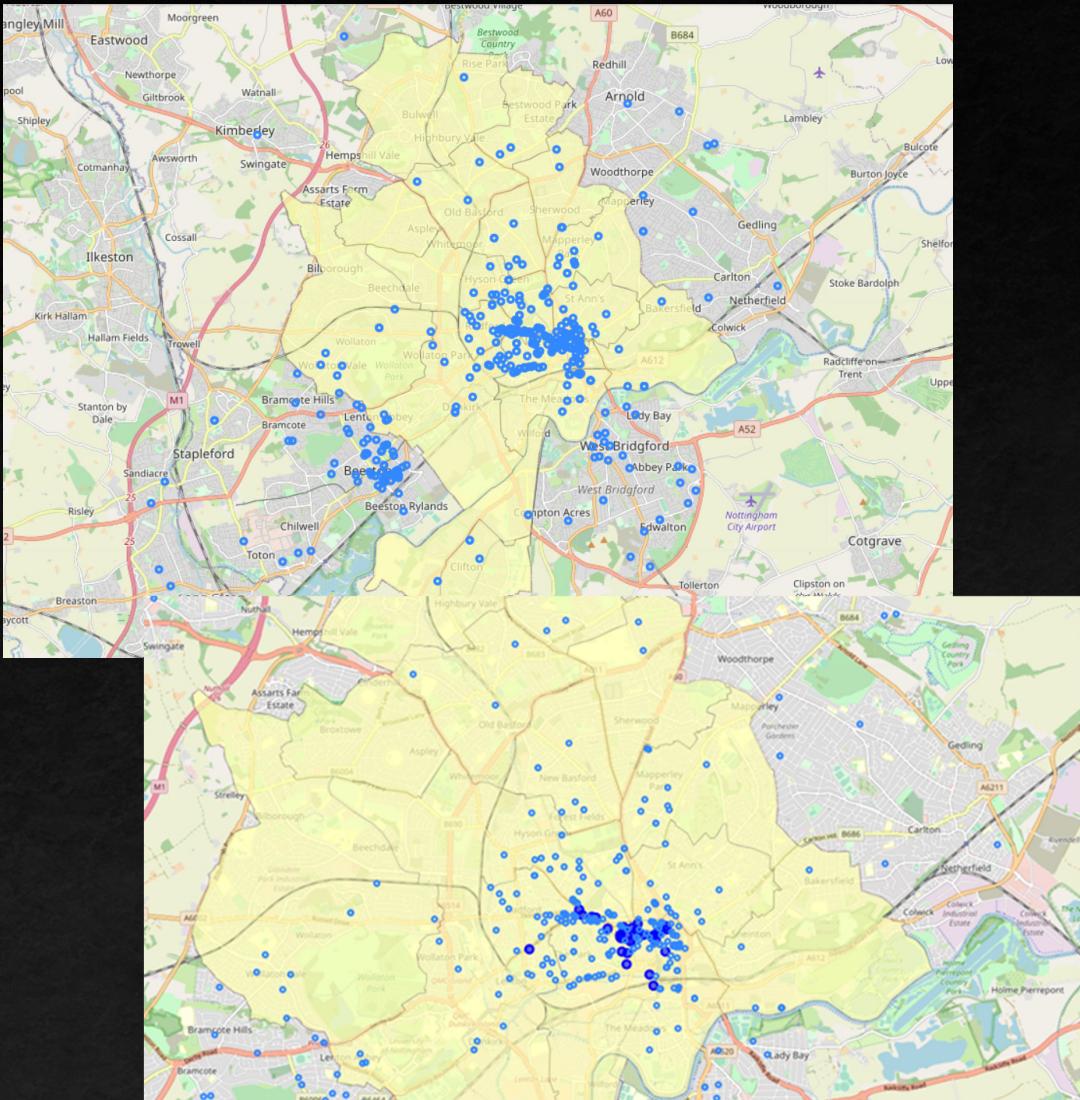
# Methodology



- Descriptive Statistics

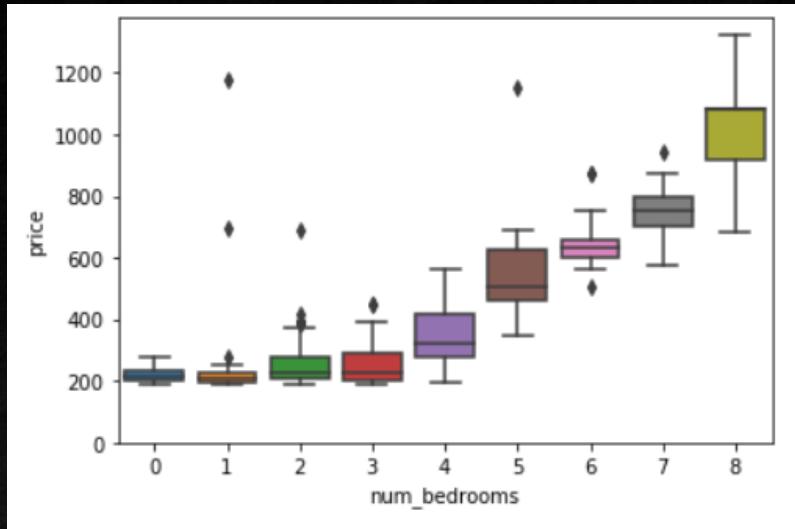
- Dealing with missing values
- Data Formatting

- Folium
- Foursquare

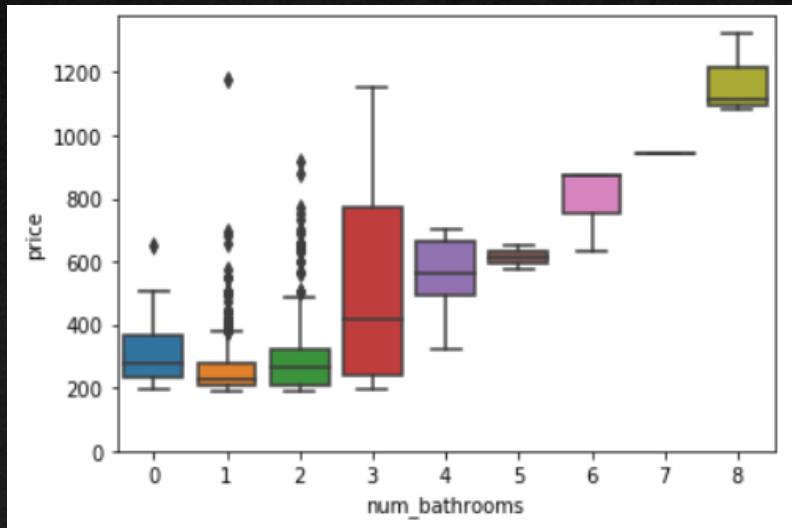


# Results

- Visualisation means were created using Python library Folium.
  - Top: property data reveals certain clusters of areas
  - Bottom: Entertainment data and property data combined
    - Area of interest: ~NG7



## Results (cnt'd)



- Top: price vs number of bedrooms
- Bottom: price vs number of bathrooms
  
- Similar trends in both:
  - Possible conclusions:
    - Price increases with the number of rooms
    - Rents for studios and 1-bedroom properties as well as for 2- and 3-bedrooms are relatively similar

# Summary

- Work conducted as part of the Coursera course 'Applied Data Science Capstone' week 5
- Investigated property data for Nottingham, UK and entertainment options with a focus on students
- Initial data pre-processing and analysis on data was conducted
- Visualisation using Python's Folium library
- Foursquare City Guide API was used to obtain some additional information for things to do in Nottingham
- Data showed that the area around NG7 provides reasonably priced properties while being in close proximity to entertainment options