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10/7/2020

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1 Introduction

The goal of this project is to predict house prices in the Greater London Area based on the type of property and the area of London that the property resides in.

The dataset for the project is made from data sourced from HM Land Registry and FreeMapTools. This data has been pre-processed into a dataset titled lhd.rds. The data chosen is from a 10 year period 2009-2019. The reason 2020 has been left out of the data is that is an incomplete year at the time of analysis. The data contains 4 different types of property detached; flats/maisonettes; semi-detached and terraced. It doesn't contain number of rooms or the area squared of the property, however some feature engineering is performed to try to improve results and enhance the data.

The price paid data set from the HM Land Registry is joined together with spatial data to add latitude and longitude for the properties based on their postcodes. This will allow for mapping of the data.

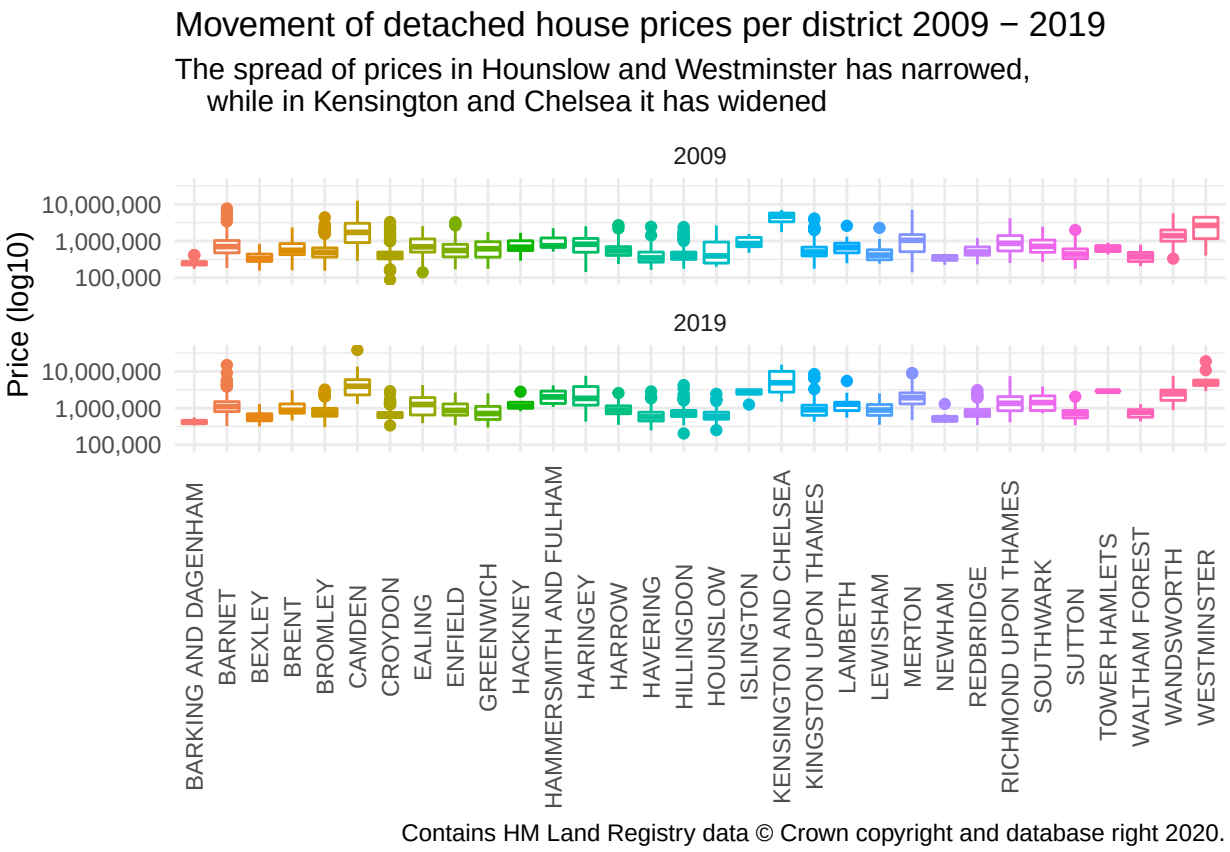
2 Data Wrangling

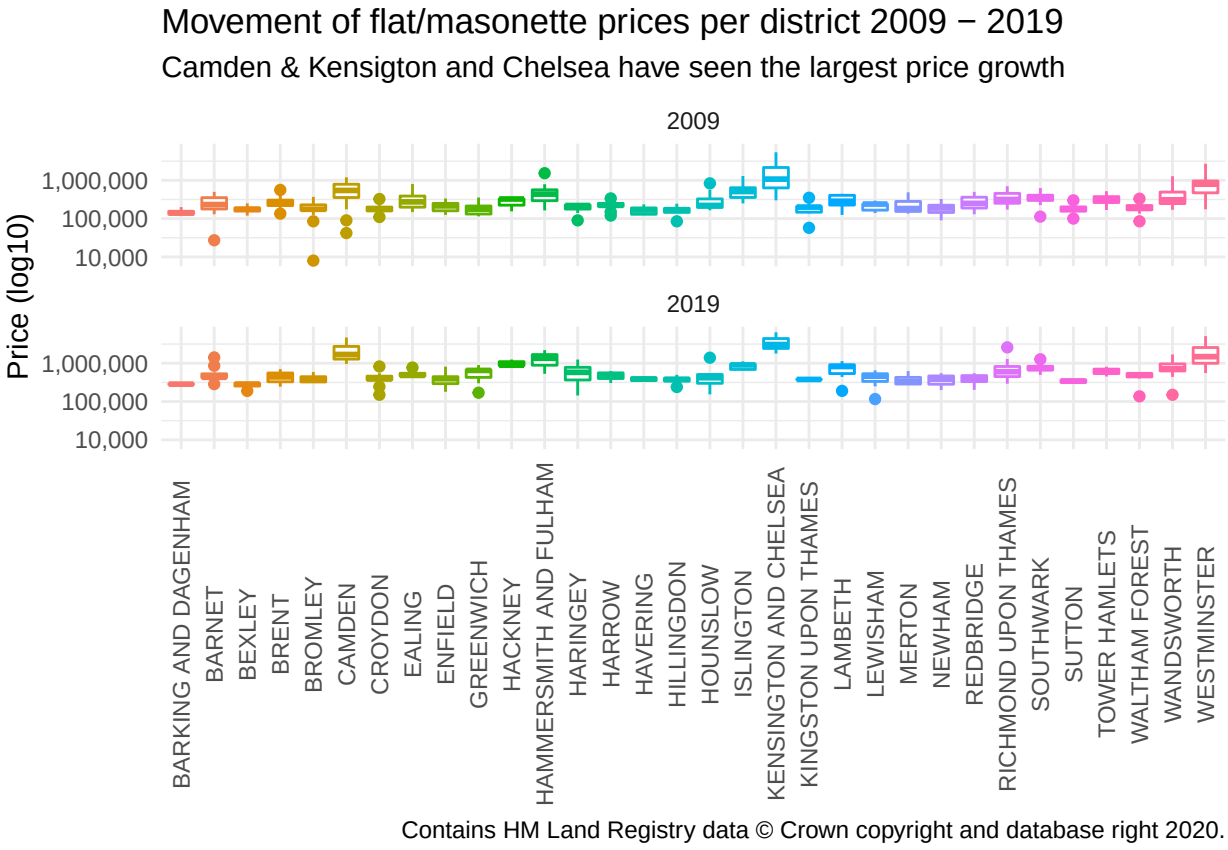
As a first step data, that is in logical form (true/false) is converted into integers 1 or 0. Next all columns containing character data are factorized. Next a new feature is created based on the outward code contained in a postcode i.e the sub-district and another feature containing the number of times a property was observed to be sold in the 10 year time period is added.

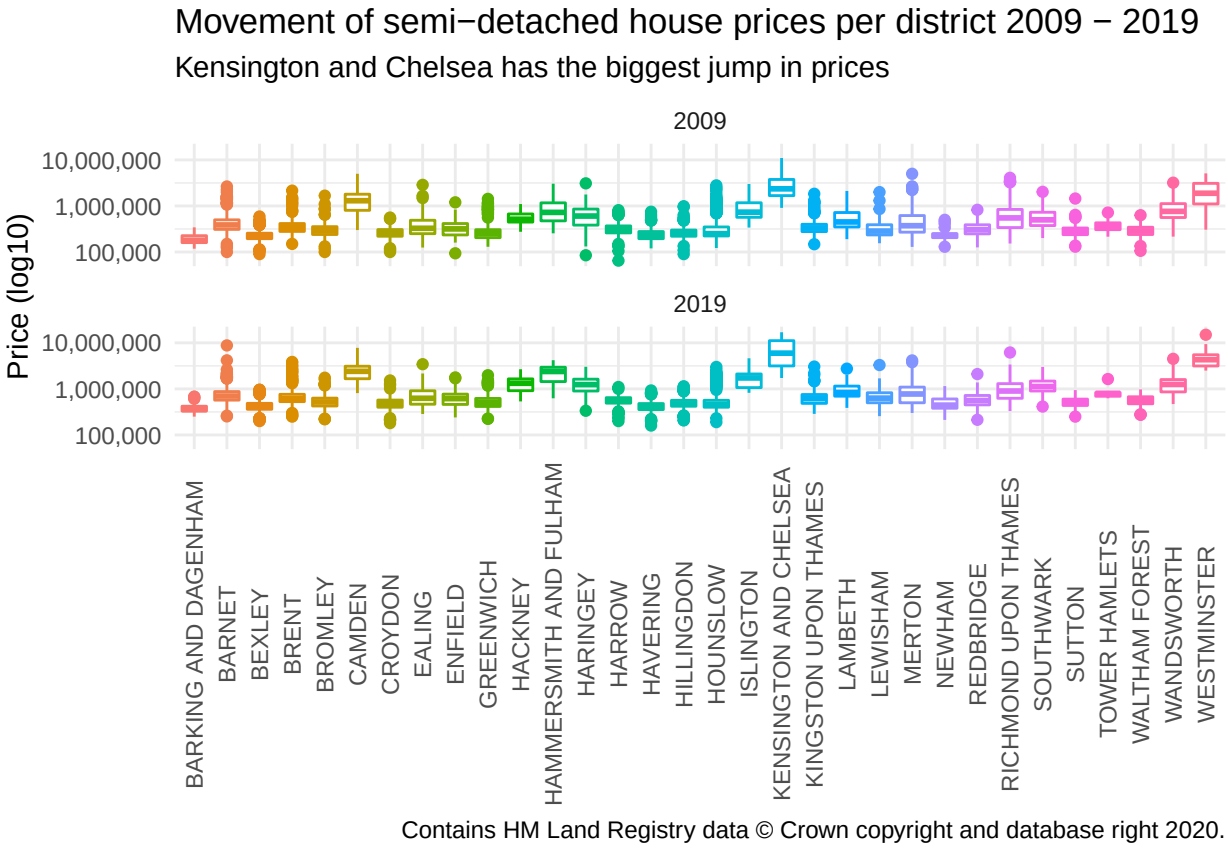
3 Exploritory Data Analysis

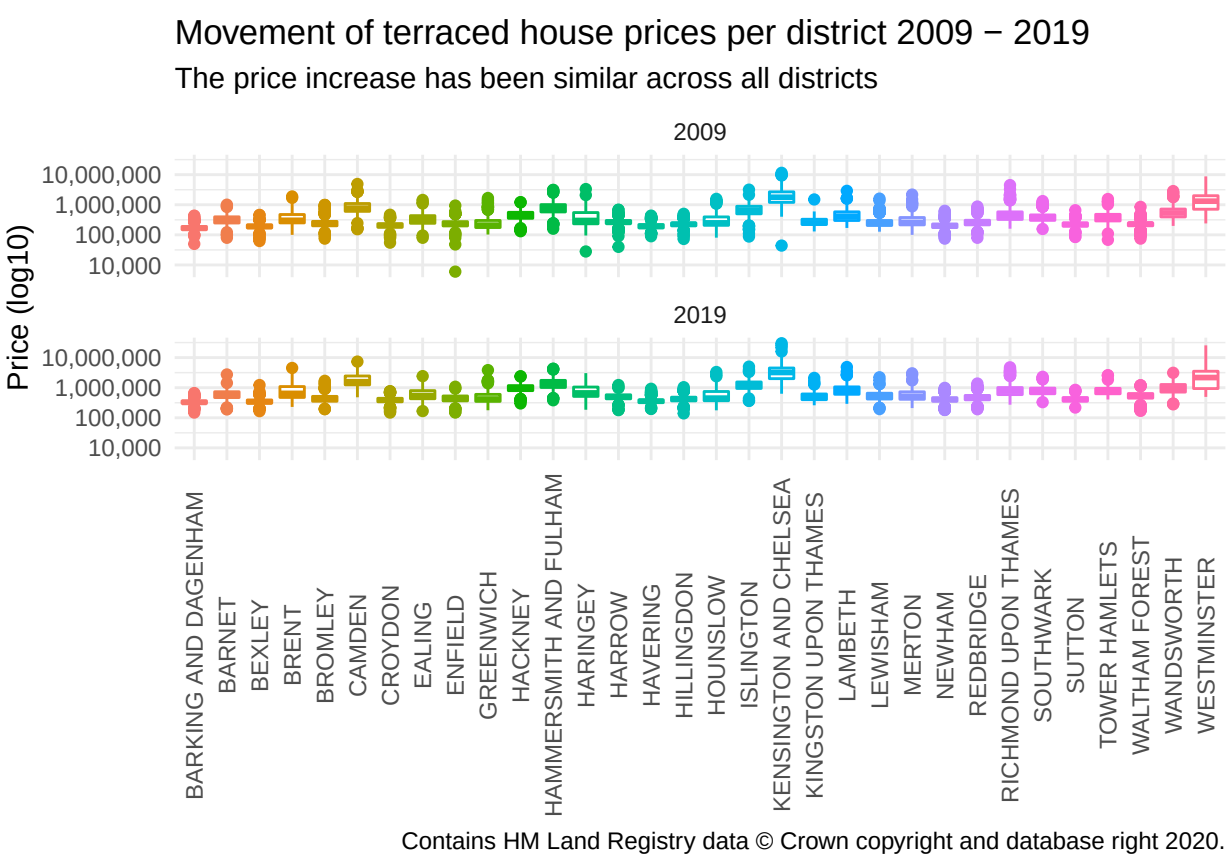
Now that the dataset is cleaned, an exploration of the data is performed. The data consists of 477382 rows of data, each row observes a single sale. The are 12 features in the dataset, with price being the outcome feature.

First the price movement for each property type is plotted

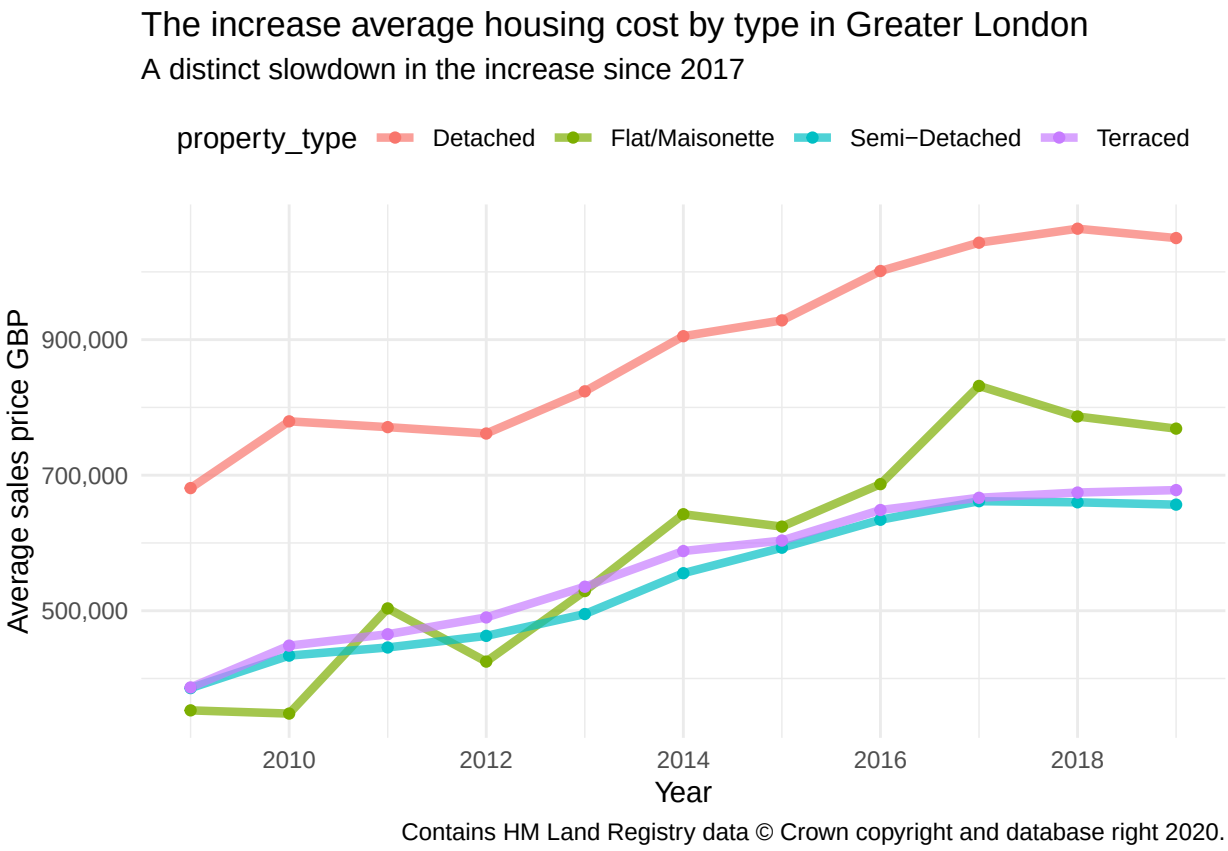








3.1 How does the avg price increase year on year ?



4 Methods/Analysis

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7 Disclaimers

8 Appendix