Example

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#
Hands-on Example with MGWR
Notebook Outline:
An example of hedonic house price modeling using MGWR - Section 1 - Section 2 - Section 3
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1 Introduction to the Dataset

1.0.1 Please use this link to directly download a csv of the dataset

The raw data has been obtained from https://www.kaggle.com/harlfoxem/housesalesprediction. The data are cleaned and aggregated to the census tract level for King county, WA to make it smaller in size and manageable for the workshop.

1.0.2 Study area and aggregation

1.0.3 Aggregated dataset snapshot

- **houses** - number of houses in the census tracts

Dependent variables

- **avg_price** - average house prices in the census tracts

OR

- **ln_avg_price** - log-transformed average house prices in the census tracts

Independent variables

- **avg_tech** - average technology related jobs in the census tracts
- **avg_unemp** - average unemployment rate in the census tracts
- **avg_index** - average number of house with a view to the waterfront
- **avg_basement** - average basements in the houses in the census tracts

- **avg_water_dist** - average distance to nearest waterfronts from the houses in the census tracts
- **avg_sqft** - average square footage of living area in houses in the census tracts
- **avg_age** - average age of housing units in the census tracts

Dependent variable distribution

Hence, we use the log-transformed dependent variable *ln_avg_price*

2 Loading the Dataset

Open the MGWR GUI software on your desktop to follow along!

At this stage I am going to do the steps elaborated below live. The screenshots of the steps below will guide you if you need additional reference.

Please note, the screenshots below are taken on a Windows system. If you are using the software on Mac, the interface might differ slightly.

2.0.1 1. Loading the dataset and variables

2.0.2 2. Load the dependent and independent variables

3 Spatial Weighting Kernels and other Options

3.0.1 Advanced options

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