

House Price Case Study

Introduction

A British real estate agency will set up in the Toulouse region. She wants to know what are the most important criteria for the price of a house in order to be able to quickly assess a property.

| Variables | Variable Description | Categories/levels |
|----------------------------|---|--|
| ID | House code | |
| Town | Town where the house is located | lacroix falgarde/launaguet/mons montrabe/plaisance/st jean/toulouse tournefeuille/vieille toulouse |
| HouseSize | Size of the house (m ²) | public, private not-for-profit |
| NumberOfRooms | Number of rooms | |
| GardenSize | Size of the garden | |
| LivingRoomSize | Size of the living room | |
| DistanceFromToulouseCenter | Distance from the center of the city (km) | |
| AirConditioned | Is the house air conditioned ? | yes / no |
| Heating | Type of heating ? | gas/electric/solar |
| Price | House price (k€) | |

Questions

1. Build the roadmap of the project
2. Check the structure of the variables: are their type correct?
3. Describe quantitative variables using adequate tools. Comment. Do you have missing values? extreme values? outliers? Are the variables normally distributed? Clean data if necessary.
4. Describe qualitative variables using adequate tools.
5. Does the air-conditioned increase the price of the house?
6. Are solar heated houses more expensive?
7. Can we conclude that the price of the house increases with the number of rooms?
8. Has the garden size a big impact on the house price?
9. Can we conclude that the greater the distance from Toulouse, the lower the price?
10. Can we conclude that the greater the house size, the greater the price?
11. Do more houses with electric heating have air conditioning?

Conclude