

Challenge 1: Simple Data Analysis

Dataset *task1a.mat*: House price in suburb of Boston

The dataset concerns housing values in suburbs of Boston¹. There are 14 attributes in each case of the dataset in variable named '*x*' for a total of 506 cases. They are:

1. per capita crime rate by town
2. proportion of residential land zoned for lots over 25,000 sq.ft.
3. proportion of non-retail business acres per town.
4. Charles River dummy variable (1 if tract bounds river; 0 otherwise)
5. nitric oxides concentration (parts per 10 million)
6. average number of rooms per dwelling
7. proportion of owner-occupied units built prior to 1940
8. weighted distances to five Boston employment centres
9. index of accessibility to radial highways
10. full-value property-tax rate per \$10,000
11. pupil-teacher ratio by town
12. $1000(Bk - 0.63)^2$ where Bk is the proportion of blacks by town
13. percent lower status of the population
14. Median value of owner-occupied homes in \$1000's

Challenge: Analyze what parameters could be interesting to put into the models for analysis. Discuss the reasons.

¹Harrison, D. and Rubinfeld, D.L. 'Hedonic prices and the demand for clean air', J. Environ. Economics & Management, vol.5, 81-102, 1978.