Econometrics Group Assignment 1

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## Background

This data analyzes the various factors that coudld go into a home purchase. The data includes: home prices, crimes committed per capita in the neighborhood, how much nitrous oxide is present on the site, average number of bedrooms per house, estimated distance to work, accessibility to radial highways, property taxes, student teacher ratio in the school districe, and the percentage of ‘low status’ people in the vicinity.

Each of the graphics below were created to look for correlation between factors and median housing prices.

pander(summary(my\_data))

Table continues below

|  |  |  |  |
| --- | --- | --- | --- |
| median\_price | crime\_per\_capita | nox | rooms |
| Min. : 5000 | Min. : 0.0060 | Min. :3.85 | Min. :3.560 |
| 1st Qu.:16850 | 1st Qu.: 0.0820 | 1st Qu.:4.49 | 1st Qu.:5.883 |
| Median :21200 | Median : 0.2565 | Median :5.38 | Median :6.210 |
| Mean :22512 | Mean : 3.6115 | Mean :5.55 | Mean :6.284 |
| 3rd Qu.:24999 | 3rd Qu.: 3.6770 | 3rd Qu.:6.24 | 3rd Qu.:6.620 |
| Max. :50001 | Max. :88.9760 | Max. :8.71 | Max. :8.780 |

Table continues below

|  |  |  |  |
| --- | --- | --- | --- |
| distance | road\_access | land\_tax | student\_teacher |
| Min. : 1.130 | Min. : 1.000 | Min. :18.70 | Min. :12.60 |
| 1st Qu.: 2.100 | 1st Qu.: 4.000 | 1st Qu.:27.90 | 1st Qu.:17.40 |
| Median : 3.210 | Median : 5.000 | Median :33.00 | Median :19.10 |
| Mean : 3.796 | Mean : 9.549 | Mean :40.82 | Mean :18.46 |
| 3rd Qu.: 5.188 | 3rd Qu.:24.000 | 3rd Qu.:66.60 | 3rd Qu.:20.20 |
| Max. :12.130 | Max. :24.000 | Max. :71.10 | Max. :22.00 |

|  |  |  |  |
| --- | --- | --- | --- |
| low\_status\_percent | log\_price | log\_nox | log\_land\_tax |
| Min. : 1.730 | Min. : 8.517 | Min. :1.348 | Min. :5.231 |
| 1st Qu.: 6.923 | 1st Qu.: 9.732 | 1st Qu.:1.502 | 1st Qu.:5.631 |
| Median :11.360 | Median : 9.962 | Median :1.683 | Median :5.799 |
| Mean :12.701 | Mean : 9.941 | Mean :1.693 | Mean :5.931 |
| 3rd Qu.:17.058 | 3rd Qu.:10.127 | 3rd Qu.:1.831 | 3rd Qu.:6.501 |
| Max. :39.070 | Max. :10.820 | Max. :2.164 | Max. :6.567 |

summary(my\_data)

## median\_price crime\_per\_capita nox rooms   
## Min. : 5000 Min. : 0.0060 Min. :3.85 Min. :3.560   
## 1st Qu.:16850 1st Qu.: 0.0820 1st Qu.:4.49 1st Qu.:5.883   
## Median :21200 Median : 0.2565 Median :5.38 Median :6.210   
## Mean :22512 Mean : 3.6115 Mean :5.55 Mean :6.284   
## 3rd Qu.:24999 3rd Qu.: 3.6770 3rd Qu.:6.24 3rd Qu.:6.620   
## Max. :50001 Max. :88.9760 Max. :8.71 Max. :8.780   
## distance road\_access land\_tax student\_teacher  
## Min. : 1.130 Min. : 1.000 Min. :18.70 Min. :12.60   
## 1st Qu.: 2.100 1st Qu.: 4.000 1st Qu.:27.90 1st Qu.:17.40   
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## Mean : 3.796 Mean : 9.549 Mean :40.82 Mean :18.46   
## 3rd Qu.: 5.188 3rd Qu.:24.000 3rd Qu.:66.60 3rd Qu.:20.20   
## Max. :12.130 Max. :24.000 Max. :71.10 Max. :22.00   
## low\_status\_percent log\_price log\_nox log\_land\_tax   
## Min. : 1.730 Min. : 8.517 Min. :1.348 Min. :5.231   
## 1st Qu.: 6.923 1st Qu.: 9.732 1st Qu.:1.502 1st Qu.:5.631   
## Median :11.360 Median : 9.962 Median :1.683 Median :5.799   
## Mean :12.701 Mean : 9.941 Mean :1.693 Mean :5.931   
## 3rd Qu.:17.058 3rd Qu.:10.127 3rd Qu.:1.831 3rd Qu.:6.501   
## Max. :39.070 Max. :10.820 Max. :2.164 Max. :6.567

Making changes here……

## Including Plots

You can also embed plots, for example:



Note that the echo = FALSE parameter was added to the code chunk to prevent printing of the R code that generated the plot.