

Big Data Analytics

Lab 3b

1 Description

Your first task for today is to practice the concepts of geoms and aesthetics in ggplot library. All graphics must be drawn using ggplot2 package. Your second task is to practice generating reports using the R Markdown documents.

2 Tasks

You will be using the `Boston` dataset. After you load `MASS` package, you can find it in the variable `Boston`. Now draw graphics as follows:

1. Create a new R Markdown document. Now include the following graphs in R Markdown.
2. Using the Boston dataset generate a scatter plot of `rm` versus `medv`.
3. Using the Boston dataset generate a scatter plot of `crim` versus `medv`.
4. Extending the plot from previous task, add a colour scale to the scatterplot based on the `age` variable.
5. Using an additional geom, add an extra layer of a fit line to the solution from task 3.
6. Change the method of `geom_smooth()` in previous task to `lm`. Observe the difference.
7. Following from task 3, a grid of plots (using facets) by using appropriate variables.
8. Generate a histogram of `medv` with each bar coloured grey.
9. Practice other geoms and aesthetics, use ggplot2's reference documentation available at ggplot2.org.
10. For each graph you must also include a brief commentary. Use/practice different formatting styles available for R Markdown.