

Assignment 1

Using **Rstudio**, write an **R Markdown** file (**.Rmd**) for the list below to be compiled by **knitr** (engine of dynamic report generator) which can be then rendered to other document formats (e.g. html, pdf, docx). Each point should represent an **R code chunk** followed by rendering of an image.

1. Read the built-in `mtcars` data in R.
2. Generate a pie chart using `ggplot2` to illustrate the distribution of cars based on their `cylinder (cyl)` values from the `mtcars` dataset.
3. Produce a bar plot using `ggplot2` to depict the count of each `carb` type within the `mtcars` dataset.
4. Subsequently, present a stacked bar plot using `ggplot2`, illustrating the count of each `gear` type segmented by their respective `cylinder (cyl)` values.
5. Create a scatterplot using `ggplot2` to depict the correlation between `weight (wt)` and `miles per gallon (mpg)`.
6. Repeat the above using density plot, heatmaps, dot plots, ecdf and q-q plots then comment on best display method in your opinion.
7. Plot a visualization using `ggplot2` with the dataset of your preference, and compose a concise summary explaining the rationale behind your selection of this visualization type.