

Competition Policy

Session 1. Introduction to markdown

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What is Markdown?

- Markdown is a markup language for creating documents.
 - Simple Syntax (see below)
 - Can be converted to different documents (e.g. pdf, html, word, . . .).
 - Used by R, Jupyter, Github, etc. . .
 - Think of it as a streamlined version of latex.
 - We made this presentation using Markdown!



How to work with markdown

- R Studio supports R-Markdown.
- Consists of a markdown file ('*.Rmd').
- Very good documentation <https://rmarkdown.rstudio.com>
- Can be knitted in R Studio or converted using pandoc.



Anatomy of a markdown file

```
---  
title: "My Document"  
output: html_document  
author: "name"  
date: "date"  
---
```

- multitude of options:
 - output: beamer_presentation, word_document, pdf_document
 - See documentation for more
- preamble followed by content



Headers

Header 1

Header 1.1

Header 1.1.1



Lists

1. item 1

2. item 2

- item 1

- subitem

- item 2



Formatting

`monospace`,

monospace



Tables

```
|city      |population|
|-----|-----|
|Tilburg   |  211648 |
|Amsterdam |  821752 |
```

This gives:

| city | population |
|-----------|------------|
| Tilburg | 211648 |
| Amsterdam | 821752 |



Formulas

- Markdown allows to use Latex code for formulas:

in-line formula: `$f(x) = a_0 + a_1 x + a_2 x^2$`

in-line formula: $f(x) = a_0 + a_1x + a_2x^2$

or below text:

`\[2 = \lim_{n\rightarrow \infty} \sum_{i=0}^n \frac{1}{2^i}\]`

$$2 = \lim_{n \rightarrow \infty} \sum_{i=0}^n \frac{1}{2^i}$$



Inclusions

link: [link](www.link.com)

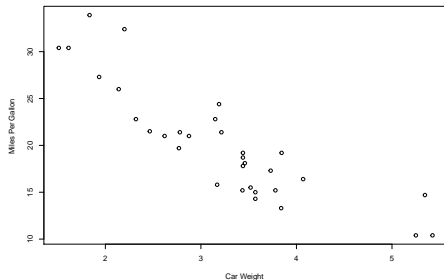
image: ![Image](image.png "image")



Including R code

- R markdown also allows to directly include r code

Scatterplot Example



Git

- Git is a language to track versions of documents. (distributed version control system)
- Imagine working on a word document for a long time.
 - How do you make sure to know what you did?
 - You'd create periodical backups.
 - But this is not very efficient!
- Instead version management:
 - Start with the initial commit.
 - Whenever you change something git only saves the changes.
 - You can access the current up-to-date document.
 - You can also access any previous version.
 - You see which line was changed!



Github

- You can run git on your own computer
- or on specialized websites:
 - Github most popular. <https://github.com>
 - many alternatives: <https://about.gitlab.com> <https://bitbucket.org>
 - Github offers education accounts <https://education.github.com>

