LaTeX: Part II
Working with R

Main Idea: Often you need to create a dynamic report, which displays graphs, data tables based on input data. Changing the data you don't want to rewrite a report, inserting manually new tables, values and graphs. How it works? You just upload new data and press 1 button to rerun a code!

This is amazing!

WOW!

HOW?

1. Install Tex software (use MiKTeX for Windows)

   Note: Tex - old typesetting language 1977. LaTeX is an updated version of TeX
2. Install R-Studio
3. Install packages: for Sweave - preinstalled for "knitr" - instalation required
4. In RStudio: File → New File → → R Sweave (for both)
5. For knitr (by default Sweave is used):

   Tools → Global Options → Sweave → → switch to "knitr" in drop-down list

Knitr VS Sweave

Actually, knitr is just updated version of Sweave, so **always use knitr!**

knitr supports Latex & Rmarkdown

Best Practices

1. Choose best document class: article, beamer, etc.
2. Use suitable advanced packages: hyperref, booktabs, etc.
3. Use appropriate settings for R-code chunks:

   <<hide-par, echo=FALSE, warning=FALSE, message=FALSE, out.width= =..., fig.align='center'>>=
4. For displaying results use inline code:

   p=\Sexpr{t.test(a)$p.value} Autoupdate!
5. Use xtable() function in R to produce LaTeX table [but it will not be updated automat.]