

Lecture 9: .Rmd presentations and dashboards, and HTML Interactivity

Data Science for Business Analytics

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- May 14th:
 - ▶ Lectures on big data related concepts cancelled
 - ▶ Two additional sessions dedicated to HWs and project
- Project:
 - ▶ Website not required anymore.
- HW3 + HW4:
 - ▶ HW3 is related to lectures 1 to 8.
 - ▶ HW4 extends HW3 using today's lecture.

- This morning:
 - ▶ Course evaluation.
 - ▶ R markdown presentations and dashboards.
 - ▶ One additional session dedicated to HWs and project.
- This afternoon:
 - ▶ Nataliya Klimenko, Swissquote Bank SA.
 - ▶ Julien Eberle, Swiss Data Science Center.

R Markdown to produce presentations:

- Less visual control than with Keynote/PowerPoint.
- But automatically inserting the R code results saves huge amounts of time.

Presentations work by dividing your content into slides:

- New slide beginning at each first (#) or second (##) level header.
- Horizontal rule (----) for a slide without header.

Three presentations formats built-in:

1. `beamer_presentation` - PDF presentation with LaTeX Beamer.
2. `ioslides_presentation` - HTML presentation with ioslides.
3. `slidy_presentation` - HTML presentation with W3C Slidy.

Other formats are provided by packages:

4. `revealjs::revealjs_presentation` - HTML presentation with `revealjs`
5. `rmdshower::shower_presentation` is a wrapper around `shower`

- Useful to communicate large amounts of information visually and quickly.
- E.g., at-a-glance views of KPIs relevant to a particular objective/business process.

flexdashboard:

- Each level 1 header (#) begins a new page in the dashboard.
- Each level 2 header (##) begins a new column.
- Each level 3 header (###) begins a new row.
- Similarly simple tools for creating sidebars, tabsets, value boxes, gauges, etc.

Any HTML format can contain interactive components:

- [htmlwidgets](#) are R packages/functions for interactive HTML visualisations.
- No knowledge of HTML or JavaScript needed to use them.
- Details are wrapped inside the package, so no need to worry about it.

Packages that provide [htmlwidgets](#):

- [DT](#) for interactive tables.
- [leaflet](#) for interactive maps.
- [dygraphs](#) for interactive time series visualisations.
- [threejs](#) for interactive 3d plots.
- ... and many more!