Using advanced features of code notebooks

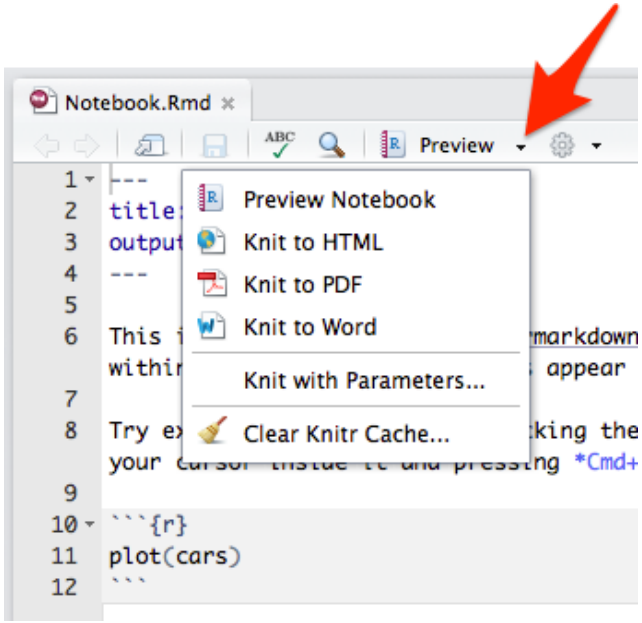
Publishing and sharing a code notebook

- Offline publishing
- Online publishing

Publish your R Notebook: Offline

Your R Notebook may be exported as

- HTML (Website)
- PDF (LaTex required)
- Microsoft Word (Microsoft Office required)



➢ The exported file is stored in your working directory.

Install program for rendering to PDF – MiKTeX

1. To render R Markdown files to PDF you have to download TeX for Windows:

   http://miktex.org/2.9/setup

2. Afterwards use the following command in your R script to set the environmental variable “Path”:

```
Sys.setenv(PATH = paste(Sys.getenv("PATH"),
                        "~/MiKTeX 2.9/miktex/bin/x64", sep=.Platform$path.sep))
```

   This step is not always required

3. Klick "Yes" when R asks permission to use MiKTeX.

4. Restart R.

For Mac OS: http://tug.org/mactex/ and only a restart is needed

Two options for publishing online

Rpubs

RPubs

- Easy way to share your R markdown files with the **public**.
- Free, but you need an account.

Note: everything you publish on Rpubs.com can be seen (and used by everyone).

Rstudio Connect

- Commercial platform.
- Professional features:
  - Access control.
  - Scheduled Report updates.
  - Automatic report mailings.
  - "IT ready" and scalable.
- Starting at 14'995$/year.

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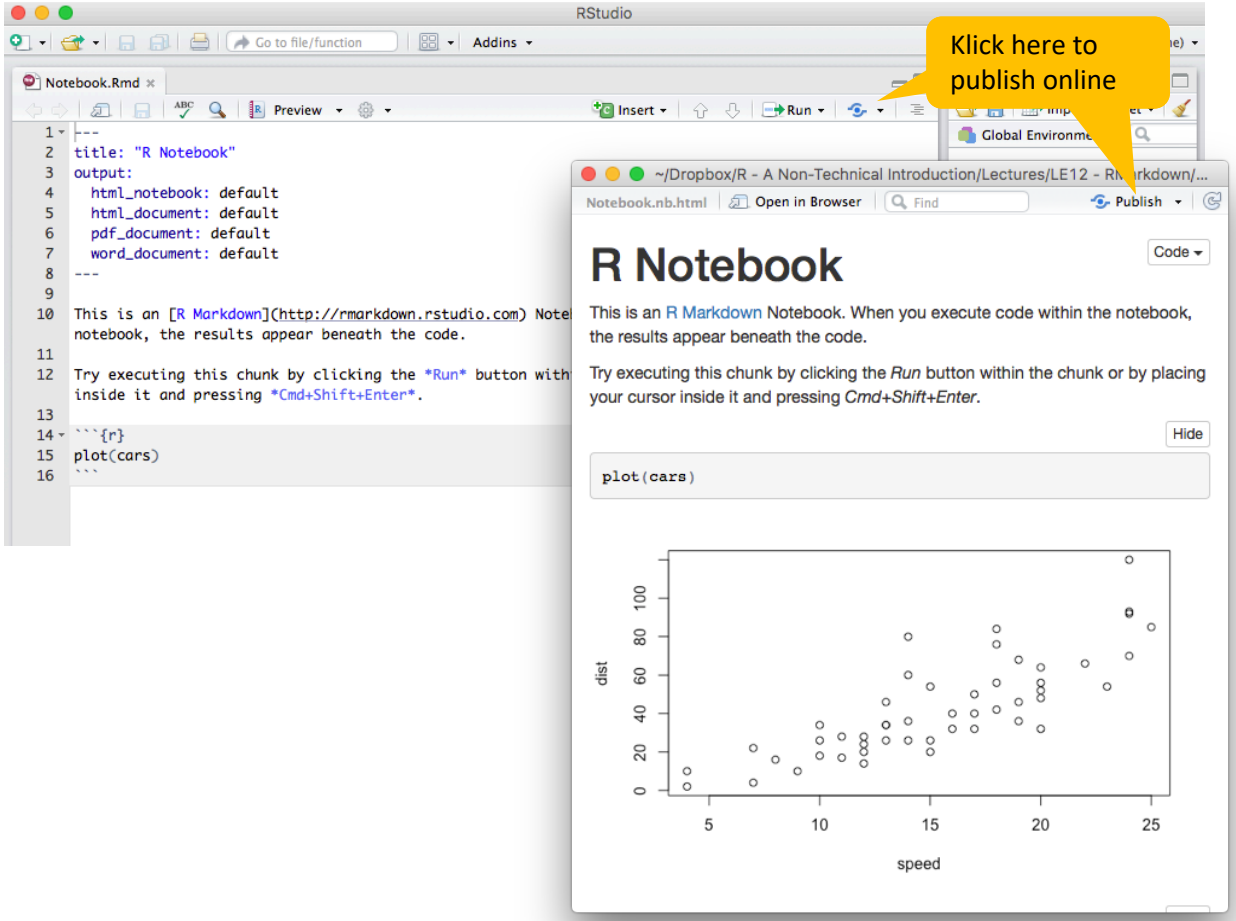
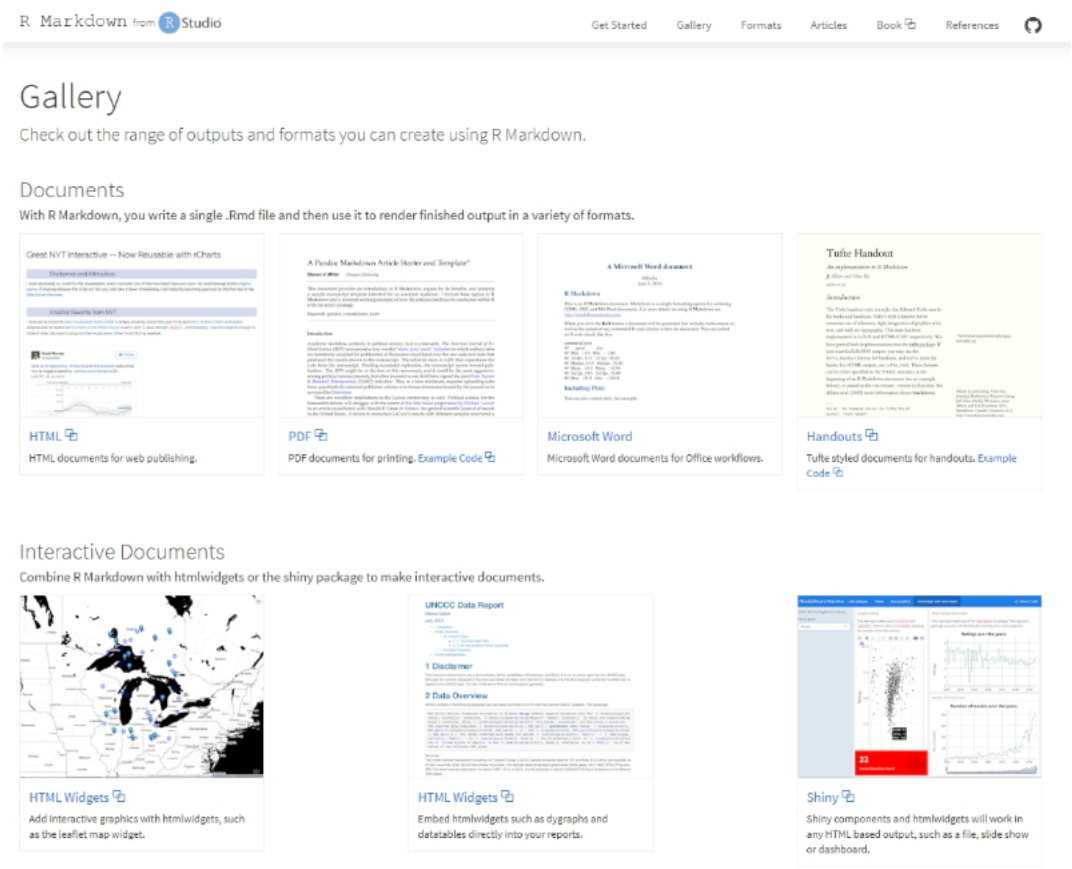


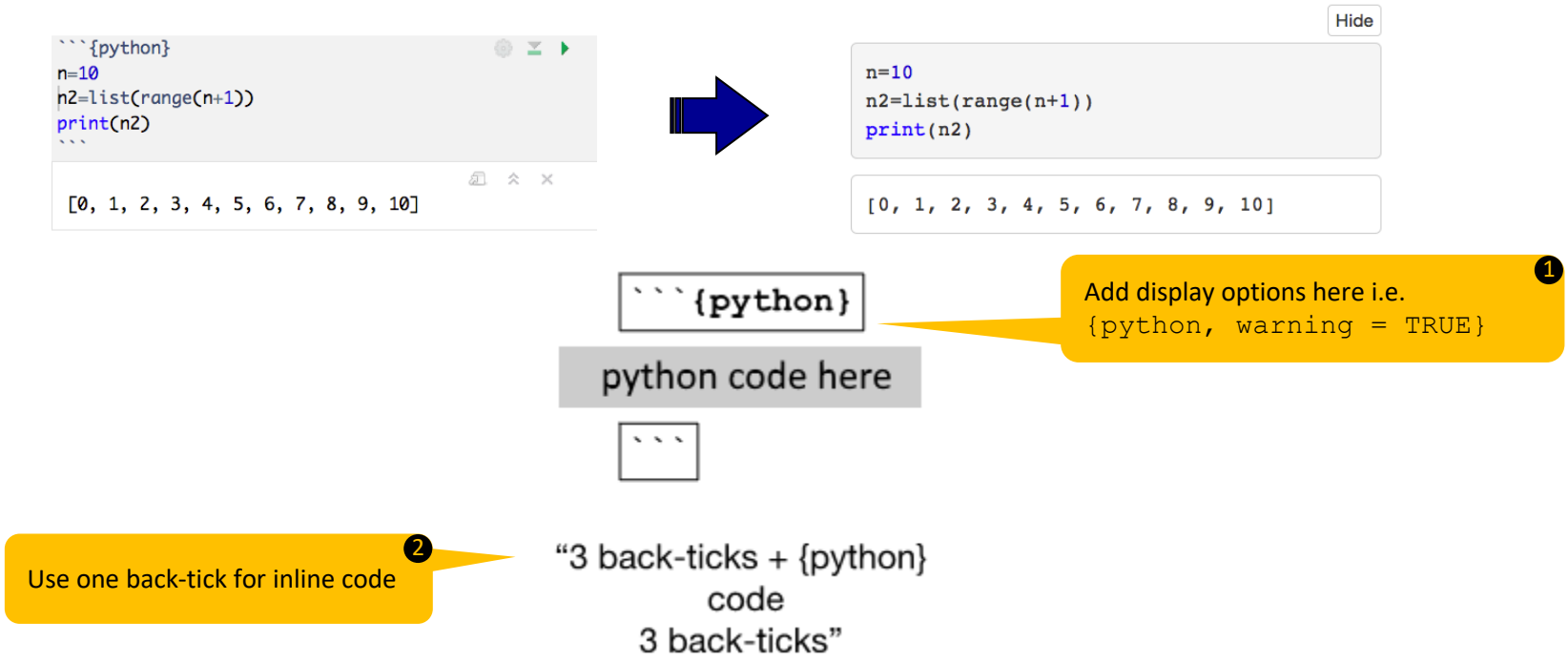
Advanced features:
Look at the R Markdown homepage for an overview



https://rmarkdown.rstudio.com/gallery.html

Advanced features:
Embed Python code into your R Notebook

Insert Python code as chunks:



- **Note**: You may also integrate SQL code chunks.

Advanced features: Embed YouTube Video

Goal: Render HTML directly in your notebook and thus embed images and other media.

Example: Include YouTube videos in your website.

Step 1: Go on YouTube, select a video and select "Share">"Embed" and copy the HTML code.

Step 2: Paste the HTML code in the Notebook.

Embed Video

```
<iframe width="560" height="315"
src="https://www.youtube.com/embed/zNz
Z1PfUDNk" frameborder="0
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```

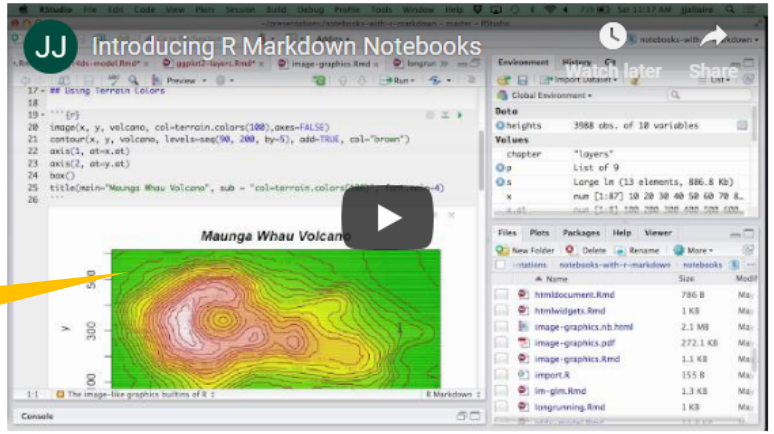

You can play the video directly from your notebook

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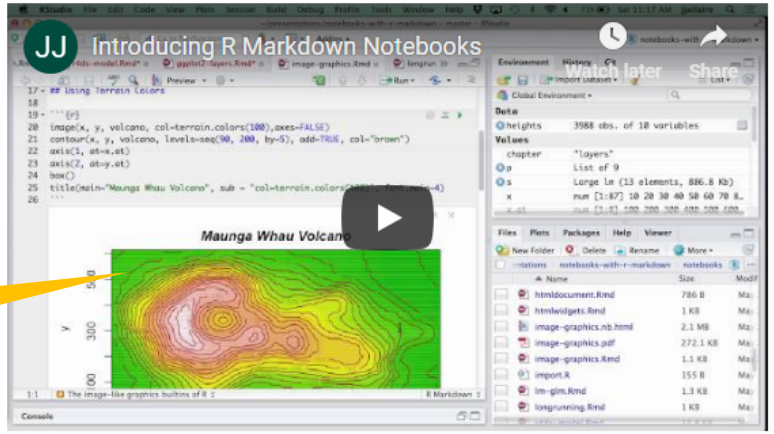

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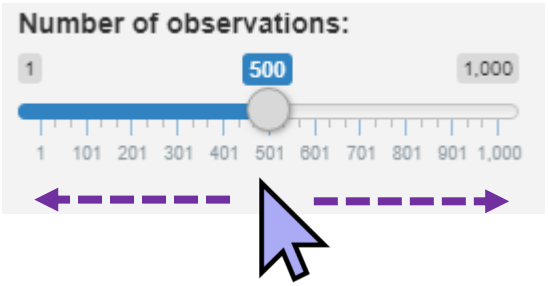
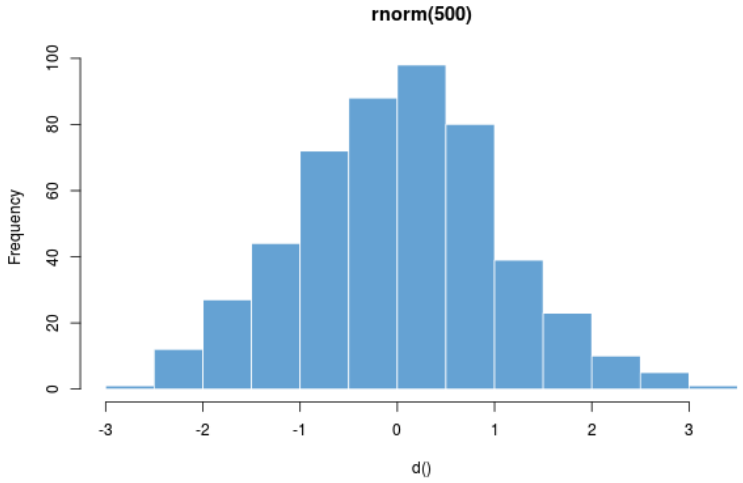
Advanced features: Interactive widgets

- Control parameters of R Code manually
- Generate interactive visualizations
- Provide "lightweight apps"





https://shiny.rstudio.com

R Notebooks in the cloud:
Use the service of Microsoft, etc.

- Microsoft Azure Notebooks:

  https://notebooks.azure.com