

# Example of Slides with Sweave

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June 27, 2022

# Introduction

- This is a brief example of Beamer slides with Sweave (Leisch and R Core Team, 2022).
- We will include some plots, a table, and references.
- The document can be compiled in R (R Core Team, 2022) via the following commands. These require the `knitr` package to be installed.

```
R> knitr::Sweave2knitr("slides.Rnw")  
R> knitr::knit2pdf("slides-knitr.Rnw")
```

If successful, the resulting PDF should be named `slides-knitr.pdf`.

- More information can be found at <https://yihui.org/knitr/demo/sweave/>.

## Plot

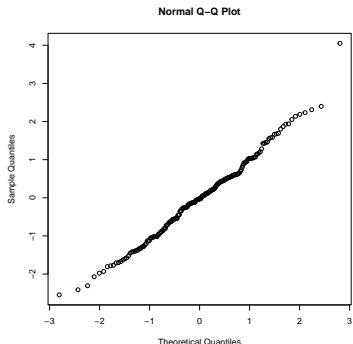
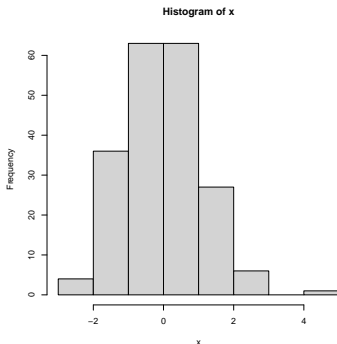
- Let  $X_i \sim N(0, 1)$  for  $i = 1, \dots, 200$ .

```
R> x = rnorm(200)
R> head(x, n = 20)

## [1] -0.6530237 -1.6312547  0.6544297 -0.9661343  0.5923378  1.0497896
## [7] -0.8580811 -2.3058307  0.5212986  0.4266857 -1.2825844  0.6230226
## [13] -1.7688011 -1.0357340 -1.0522551 -0.0351578 -0.1529727 -0.1740271
## [19] -0.5469867 -2.4121314
```

- Here is a histogram and a Q-Q plot.

```
R> hist(x)
R> qqnorm(x)
```



## Table

Render some rows and columns of the `mtcars` dataset as a Latex table using `booktabs`. Center the table and remove line separators.

	mpg	cyl	displacement	hp	drat	wt	qsec	gear
Mazda RX4	21.0	6	160.0	110	3.90	2.620	16.46	4
Mazda RX4 Wag	21.0	6	160.0	110	3.90	2.875	17.02	4
Datsun 710	22.8	4	108.0	93	3.85	2.320	18.61	4
Hornet 4 Drive	21.4	6	258.0	110	3.08	3.215	19.44	3
Hornet Sportabout	18.7	8	360.0	175	3.15	3.440	17.02	3
Valiant	18.1	6	225.0	105	2.76	3.460	20.22	3
Duster 360	14.3	8	360.0	245	3.21	3.570	15.84	3
Merc 240D	24.4	4	146.7	62	3.69	3.190	20.00	4
Merc 230	22.8	4	140.8	95	3.92	3.150	22.90	4
Merc 280	19.2	6	167.6	123	3.92	3.440	18.30	4
Merc 280C	17.8	6	167.6	123	3.92	3.440	18.90	4
Merc 450SE	16.4	8	275.8	180	3.07	4.070	17.40	3
Merc 450SL	17.3	8	275.8	180	3.07	3.730	17.60	3
Merc 450SLC	15.2	8	275.8	180	3.07	3.780	18.00	3
Cadillac Fleetwood	10.4	8	472.0	205	2.93	5.250	17.98	3
Lincoln Continental	10.4	8	460.0	215	3.00	5.424	17.82	3
Chrysler Imperial	14.7	8	440.0	230	3.23	5.345	17.42	3
Fiat 128	32.4	4	78.7	66	4.08	2.200	19.47	4
Honda Civic	30.4	4	75.7	52	4.93	1.615	18.52	4
Toyota Corolla	33.9	4	71.1	65	4.22	1.835	19.90	4

## References

- Friedrich Leisch and R Core Team. *Sweave User Manual*, June 2022. URL <https://stat.ethz.ch/R-manual/R-devel/library/utils/doc/Sweave.pdf>.
- R Core Team. *R: A Language and Environment for Statistical Computing*. R Foundation for Statistical Computing, Vienna, Austria, 2022. URL <https://www.R-project.org/>.