Bayesian Statistics

Here is a list of interactive applications related to the course *Bayesian Statistics course Level III/IV* .

To use these applications run *rstudio*, and set your workspace to be *Bayesian_Statistics* .

How to get the files

In order to download the applications to your computer, do the following:

1. Run rstudio
2. In the console run
    - install.packages("rmarkdown")
3. Go to File>New Project>Version Control>Git

4. In the section "Repository URL" type:
    - https://github.com/georgios-stats/Bayesian_Statistics.git

Applications

Known distributions

Just some known distributions

Execute command

    rmarkdown::run("./demo_distributions/demo_distributions.Rmd")

Central limit Theorem

A demo about the central limit theorem

Execute command

    rmarkdown::run("./demo_CLT/demo_CLT.Rmd")

Weak law of large numbers

A demo about the weak law of large number

Execute command

    rmarkdown::run("./demo_WLLN/demo_WLLN.Rmd")

Conjugate priors

Explore the behaviour of the posterior distribution, with respect to the hyperparameters of the prior distributions, and the number of observables.

Execute command

    rmarkdown::run("./demo_ConjugatePriors/demo_ConjugatePriors.Rmd")

Compare priors

Explore the behaviour of the posterior distribution, with respect to different priors (and their hyperparameters), and the number of observables.

Execute command

rmarkdown::run("./demo_ConjugateJeffreysLaplacePriors/demo_ConjugateJeffreysLaplacePriors.Rmd")

Mixture priors

Explore the behaviour of the mixture posterior distribution, with respect to mixture priors (and their hyperparameters).

Execute command

rmarkdown::run("./demo_MixturePriors/demo_MixturePriors.Rmd")