

Practical Bayesian Analysis (with Stan)

This lecture on Bayesian Analysis was held at the [Toronto Probabilistic Programming Meetup](#) at [Architech](#), Toronto, 13 April 2016.

Dependencies

We will use [R](#). Make sure to install [knitr](#) and [pandoc](#) to compile the document. The Bayesian part is based on [Stan](#) using the [rstan](#) interface.

Install all dependencies from within R:

```
install.packages('knitr')    # compile R markdown
install.packages('rstan')    # Stan interface

install.packages('dplyr')    # data munging
install.packages('ggplot2')  # plotting
install.packages('lme4')     # linear mixed models
```

Compilation

You can compile the R markdown document using `knitr` in R ...

```
library(knitr)
knit('practicalbayes.Rmd')
```

... followed by these pandoc commands:

```
# create PDF
pandoc -s -o practicalbayes.pdf practicalbayes.md

# create HTML slide show
pandoc -s -i -t slidy --mathml -o practicalbayes.html practicalbayes.md
```

The slide show (.html) might only run correctly using a server. Start a server in the directory where the .html file resides and open <http://localhost:8000> in a browser

```
python -m SimpleHTTPServer
```