
Variational Bayes Tutorial

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These pages bring together a set of tutorials and interactive exercises on Analytic and Stochastic Variational Bayes for timeseries model fitting.

The code samples provided complement the tutorial documents and are best run in conjunction with reading the relevant parts of the documents. They are provided in two forms: standalone Python code and Jupyter notebooks.

All code requires Numpy to be installed, the Stochastic VB code also requires TensorFlow v1 or v2.

Analytic Variational Bayes

Tutorial document: `FMRIB Variational Bayes Tutorial`

1.1 Code samples

- `Inferring a single Gaussian: Jupyter notebook Standalone Python`
- `Inferring a nonlinear model (single exponential decay): Standalone Python`

Stochastic Variational Bayes

Tutorial document: [FMRIB Variational Bayes Tutorial 2](#)

2.1 Code samples

- [Inferring a single Gaussian: Jupyter notebook](#) [Standalone Python](#)
- [Inferring a bi-exponential: Jupyter notebook](#) [Standalone Python](#)