

Stan is a probabilistic programming language implementing full Bayesian statistical inference with

- [MCMC sampling](#) (NUTS, HMC)

and penalized maximum likelihood estimation with

- [Optimization](#) (BFGS)

Stan is coded in C++ and runs on all major platforms (Linux, Mac, Windows).

Stan is freedom-respecting, open-source software (new BSD core, GPLv3 interfaces).

Interfaces

Download and getting started instructions, organized by interface:

- [RStan v2.5.0](#) (R)
- [PyStan v2.5.0](#) (Python)
- [CmdStan v2.5.0](#) (shell, command-line terminal)
- [MatlabStan](#) (MATLAB)
- [Stan.jl](#) (Julia)

Manual & Examples

Models are portable across interfaces, so these are cross-platform:

- [Modeling Language Manual](#)
- [Example Models](#)

More Info

Follow the links on the navigation bar (on the right) for information about users and developers discussion groups, bug and feature issue trackers, how to cite Stan and citations of Stan, how to contribute code, the development team, and the source repositories.

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