Bayesian Logistic Regression Example

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This Matlab code demonstrates the Bayesian logistic regression model introduced in Section 7 of our paper "Riemann Manifold Langevin and Hamiltonian Monte Carlo". In order to draw samples using the Bayesian logistic regression model, run one of the matlab scripts "Run_Method_Experiments.m", where "Method" corresponds to the method of sampling. This script will sample 5000 posterior samples using the chosen sampling method with each of the example datasets.

The simulations will run and the results automatically saved to the "Results" folder. You may run the simulation multiple times then run the Matlab script "CalculateStatistics.m" in the "Results" folder, specifying the method and dataset, to calculate average effective sample sizes. For example, to display the results for the Pima dataset with RM-HMC you should run the command "CalculateStatistics('RMHMC', 'Pima')". This will calculate the ESS statistics for each simulation and display averaged results over all of the runs.