

Assignment 4, due date: May 31

STATS 205: Bayesian Data Analysis

1. Download the Pima Indian dataset, “Pima.csv”, from the course website. Model the outcome variable `diabetic` (which indicates whether a Pima Indian woman is diabetic) using the covariates: diastolic blood pressure `bp`, body mass index `bmi`, and `age`. Provide the posterior distributions of model parameters and discuss your findings.
2. Download the data “absent.txt” from the course website. We want to examine the relationship between the number of days a student has been absent, `daysabs`, and the three covariates, `male`, `math` and `langarts`, which give the student’s gender, standardized test scores for math, and standardized test score for language arts respectively. Use a Poisson regression model for this purpose, obtain the posterior distributions of regression parameters, and provide their summaries. Comment on your findings.