Statistics 568 Bayesian Analysis

Spring 2021

## Homework 12

Due: Wed 04/21/21 @ 11:59pm rutgers.instructure.com/courses/120689

**Problem 1.** Chapter 8, Exercise 12.

**Problem 2.** Chapter 8, Exercise 13.

## Note.

- For both problems, although you're told to ignore nonresponse issues in the analysis, you still need think about how to express the complete data using the familiar notation of x,  $y_{obs}$ ,  $y_{mis}$ , and I. Then, for part (b), discuss in those terms what kind of assumptions you'd be effectively making about households without telephones or did not respond to the phone line questions.
- The data in Tables 8.7 and 8.8 used in these problems are simplified versions of a larger dataset, used as a running example throughout the textbook. To read more about the dataset's background, follow the pointers in the problems to the relevant chapters.
- Treat the two problems as a small, but comprehensive, applied Bayesian analysis project. Exercise good judgment throughout the model construction, fitting, and evaluation steps. Your homework should read like a self-contained report.