## Homework #5

STA 630, Spring 2025

Due: April 30, Wednesday

## Problem 1 (70 pts)

Problem 9.3 from Hoff.

- (a) 35 pts
- (b) 35 pts
- (c) Bonus: 20 pts

## Problem 2 (30 pts)

Find the likelihood function of the regression coefficient  $\beta$  for a Poisson model based on n observations:

- 1. (15 pts) with a canonical link
- 2. (15 pts) with the link  $\theta_i = \log(x_i^T \beta)$