

# Logistic regression

(when you have a binary response variable)

# Overview

- A logistic regression model
- Interpretation of slope coefficients
- Estimation of slope coefficients
- Tests and confidence intervals for slope coefficients

# Space shuttle example

- $n = 24$  space shuttle launches prior to the Challenger disaster on 27 January 1986
- Response  $y$  is a (binary) indicator variable
  - $y = 1$  if any O-ring failures during launch
  - $y = 0$  if no O-ring failures during launch
- Predictor  $x_1$  is launch temperature, in degrees Fahrenheit