

Binary Logistic Regression

Logit (η_i)

$$* \quad \eta_i = b_0 + b_1 x_1 + b_2 x_2 \dots$$

from code output

$$* \quad \hat{Y}_{\text{prob}} = \frac{\exp(\eta_i)}{\exp(\eta_i) + 1}$$

(P_i)

Logit transformation
← need to know this.

$$* \quad \begin{cases} Y_{(0/1)} = 1 & \text{if } \hat{Y}_{\text{prob}} > 0.50 \\ Y_{(0/1)} = 0 & \text{if } \hat{Y}_{\text{prob}} < 0.50 \end{cases}$$

\hat{Y}_{prob} is denoted P_i elsewhere

odd ratio

$$\underline{\underline{OR_i}} = \frac{P_i}{1 - P_i}$$