

# Logistic Regression

$$\begin{array}{c} X \\ \square \triangle \dots \end{array} \cdot \begin{array}{c} \beta_1 \\ \square \triangle \end{array} = \begin{array}{c} X' \\ \square \triangle \dots \end{array}$$

$$\begin{array}{c} X' \\ \square \triangle \dots \end{array} \xrightarrow{\text{logistic}} \begin{array}{c} p \\ \square \triangle \dots \end{array}$$

$$\text{logistic}(x) = \frac{1}{1 + e^{-x}}$$

$$Y \sim \text{Bernoulli}(p)$$