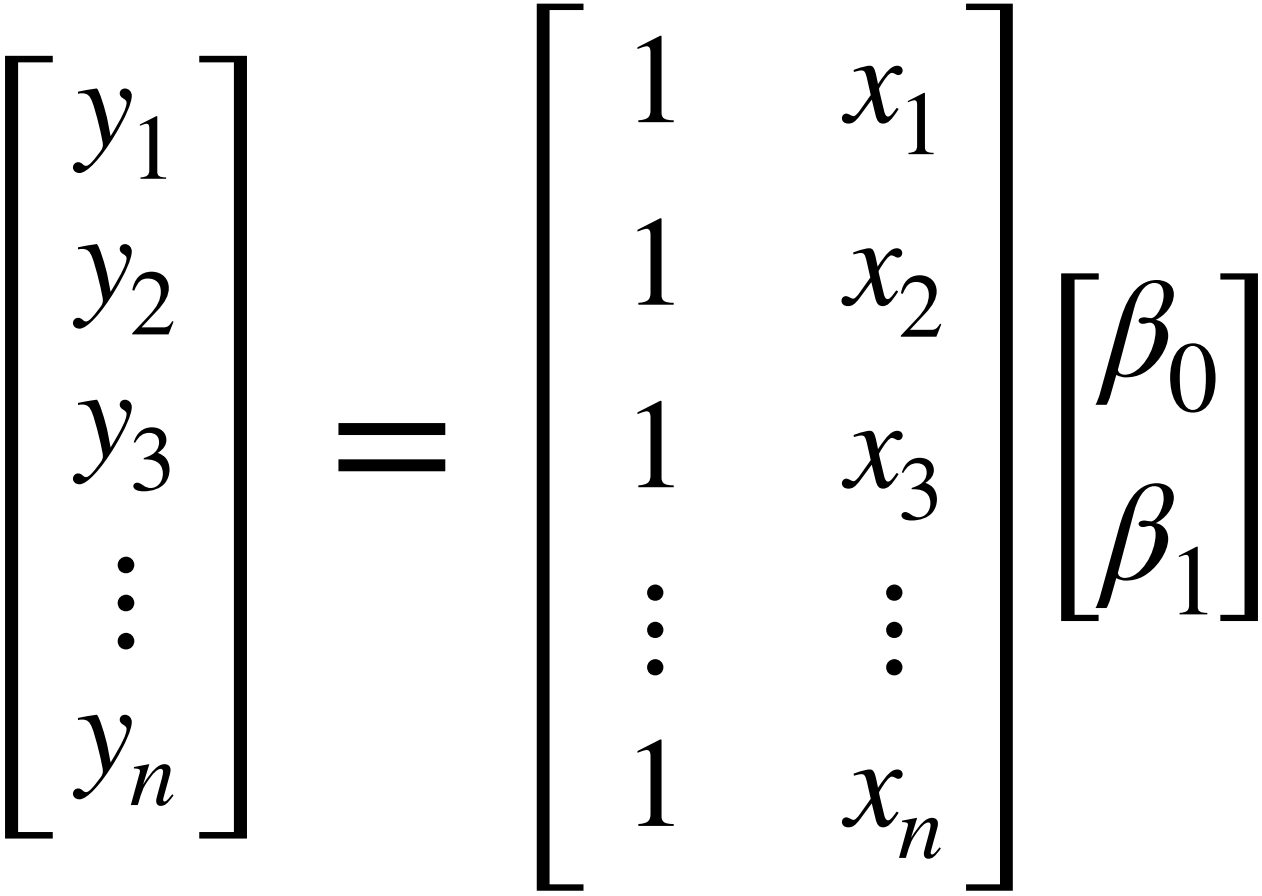
Link Functions

a method to get “non-linear” linear regression

(more on this topic in a later lecture...)

$$y == X\beta$$

$$y = g^{-1}(X\beta)$$



the **link function** transforms back the expectation of the response to the linear function

the **link function** transforms the probabilities of the levels of a categorical response variable to a continuous scale that is unbounded

Link Functions

a method to get “non-linear” linear regression

(more on this topic in a later lecture...)

$$y = X\beta$$

$$\begin{bmatrix} y_1 \\ y_2 \\ y_3 \\ \vdots \\ y_n \end{bmatrix} = \begin{bmatrix} 1 & x_1 \\ 1 & x_2 \\ 1 & x_3 \\ \vdots & \vdots \\ 1 & x_n \end{bmatrix} \begin{bmatrix} \beta_0 \\ \beta_1 \end{bmatrix}$$

$$y = g^{-1}(X\beta)$$

the **link function** transforms the probabilities of the levels of a categorical response variable to a continuous scale that is unbounded

the **link function** transforms back the expectation of the response to the linear function

Logistic Regression