- $\rightsquigarrow$

- $\rightsquigarrow$

$$b = (X'X)^{-1}X'y$$

- $E(Y_i) \equiv \mu_i = X_i\beta = \beta_0 + \beta_1 X_{1i} + \cdots + \beta_k X_{ki}$
- $(Y_i = 1) \equiv \pi_i = \frac{1}{1+e^{-x_i\beta}}$
- $V(Y_i) \equiv \sigma_i^2 = e^{x_i\beta}$
-
    -
    - β
    - β

$$(A|B) = \frac{(AB)}{(B)} \implies {\color{red}(AB)} = {\color{purple}(A|B)}\,{\color{orange}(B)}$$

$$(A|B) = \frac{(AB)}{(B)} \implies (AB) = (A|B)\,(B)$$

$$(y|\phi, \sigma^2) = \int_0^\infty (y|\lambda) \times (\lambda|\phi, \sigma^2) d\lambda$$

$$(A|B) = \frac{(AB)}{(B)} \implies (AB) = (A|B)\,(B)$$

$$\begin{aligned}
(y|\phi, \sigma^2) &= \int_0^\infty (y|\lambda) \times (\lambda|\phi, \sigma^2) d\lambda \\
&= \int_0^\infty \P(y, \lambda|\phi, \sigma^2) d\lambda
\end{aligned}$$

$$(A|B) = \frac{(AB)}{(B)} \implies (AB) = (A|B)\,(B)$$

$$\begin{aligned}
(y|\phi, \sigma^2) &= \int_0^\infty (y|\lambda) \times (\lambda|\phi, \sigma^2) d\lambda \\
&= \int_0^\infty ¶(y, \lambda|\phi, \sigma^2) d\lambda \\
&= \frac{\Gamma\left(\frac{\phi}{\sigma^2 - 1} + y_i\right)}{y_i!\Gamma\left(\frac{\phi}{\sigma^2-1}\right)} \left(\frac{\sigma^2 - 1}{\sigma^2}\right)^{y_i} \left(\sigma^2\right)^{\frac{-\phi}{\sigma^2-1}}
\end{aligned}$$

$\times$

p

$q + 11p$

p

qp

$q + 11p$

p

qp

$q + 1$

$q + 11p$

$2 = 2$

$\{1, 2, 3, 5\}$