

Some canonical link functions for GLM's

<u>Distribution of Y</u>	<u>Support of Y</u>	<u>Link function</u>
Normal (μ, σ^2)	$(-\infty, +\infty)$	$g(\mu) = \mu$ identity link
Bin (n, p) $\mu = p$	$1, 2, \dots, n$	$g(\mu) = \ln\left(\frac{\mu}{1-\mu}\right)$ logistic link
Poisson (μ)	$1, 2, \dots$	$g(\mu) = \ln(\mu)$ log link
Gamma (α, β) $\mu = \alpha/\beta$	$(0, +\infty)$	$g(\mu) = \frac{-1}{\mu}$ reciprocal link

Canonical link functions are specific types of functions that link the mean response to the linear predictor.