Some regression topics

math612.0 A1: From numbers through algebra to calculus and linear algebra

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Poisson regression

Data y_i are from a Poisson distribution with mean μ_i and $\ln \mu_i = \beta_1 + \beta_2 x_i$. A likelihood function can be written and the parameters can be estimated using maximum likelihood.

The generalized linear model (GLM)

Data y_i are from a distribution within the exponential family, with mean μ_i and $g(\mu_i) = \mathbf{x}_i'\boldsymbol{\beta}$ for some link function, g. A likelihood function can now be written and the parameters can be estimated using maximum likelihood.