Simple Linear Regression

$$y = \beta_0 + \beta_1 x_1 + \varepsilon$$

↓ (Response variable)

1 predictor (covariate)

↓ intercept

Multiple Linear Regression

$$y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \varepsilon$$

ε has a normal dist.

2 co-variates

normal distribution

Assumptions: y, ε follows normal distribution.