

Estimating Coefficients: MLE

$$\prod_{i;y_i=1} p(x_i)$$

$$\prod_{i;y_i=0} 1-p(x_i)$$

$$L(\beta_0, \beta_1) = \prod_{i; y_i=1} p(x_i) \cdot \prod_{i; y_i=0} 1 - p(x_i)$$

$$L(\beta_0, \beta_1) = \prod_{i=1} p(x_i)^{y_i} (1 - p(x_i))^{1-y_i}$$

$$l(\beta_0, \beta_1) = \sum_{i=1} y_i \log(p(x_i)) + (1 - y_i) \log(1 - p(x_i))$$





Estimating Coefficients: MLE



$$\prod_{i; y_i=1} p(x_i) \quad \prod_{i; y_i=0} 1 - p(x_i)$$

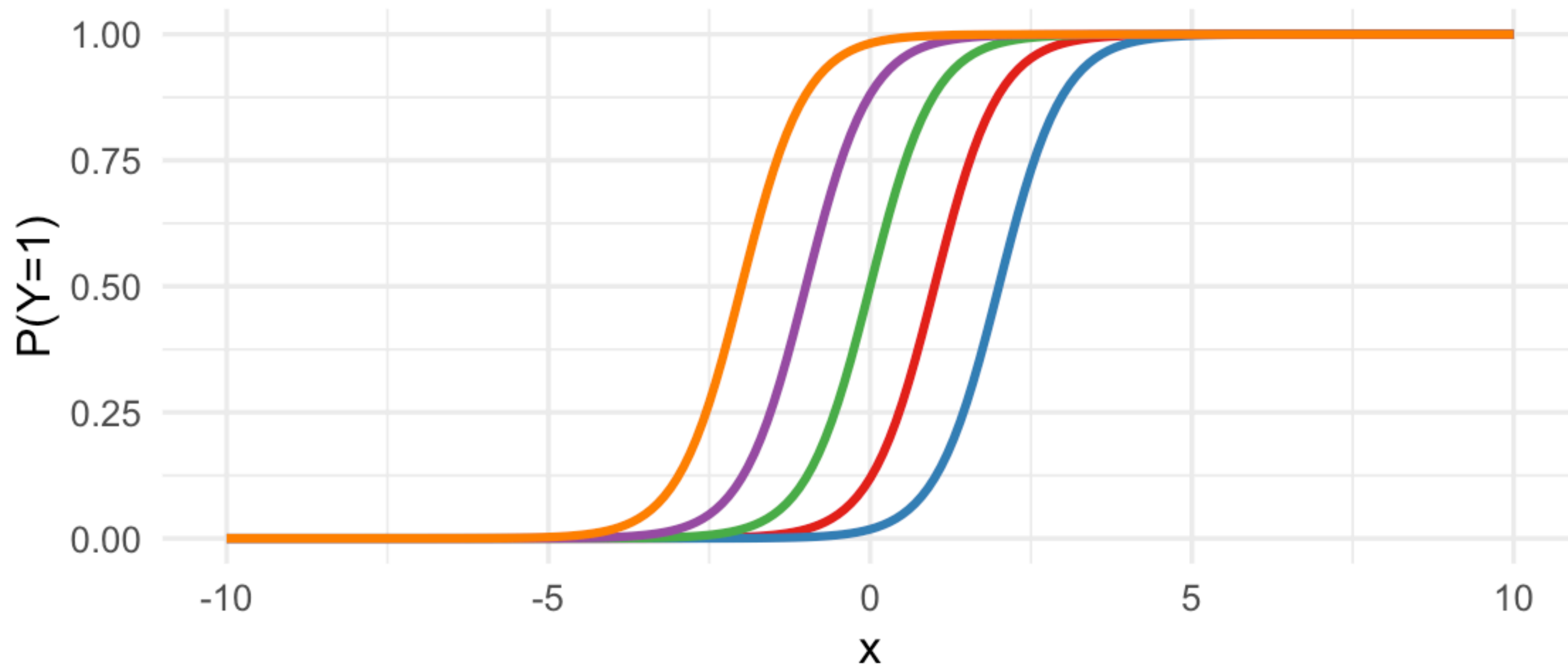
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Logistic Curves with Different Intercepts

$\text{intercept} + 2 \cdot x$



Intercept — -2 — -4 — 0 — 2 — 4