Simple Linear Regression

Simple Linear Regression

$$\hat{y} = b_0 + b_1 X_1$$

- $\hat{y}$ — Dependent variable
- b_0 — y-intercept (constant)
- b_1 — Slope coefficient
- X_1 — Independent variable

Simple Linear Regression

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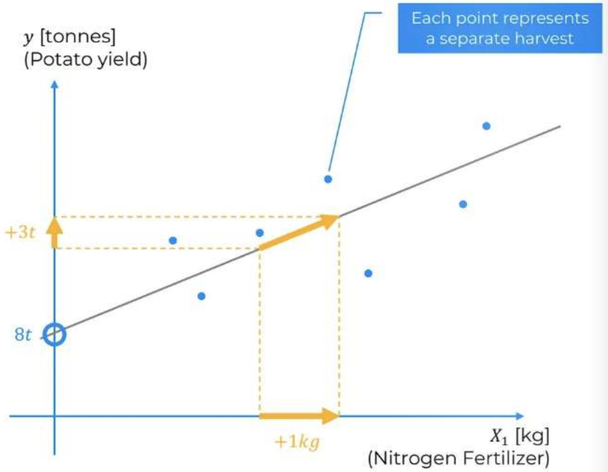
$$\hat{y} = b_0 + b_1 X_1$$

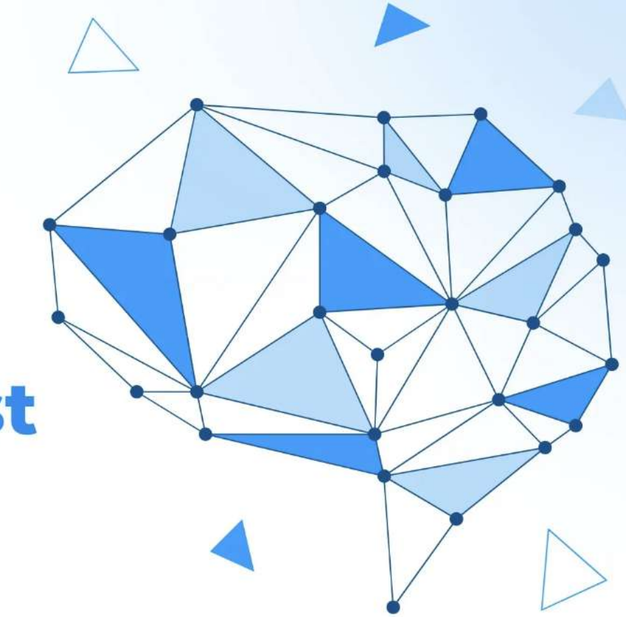
$$Potatoes[t] = b_0 + b_1 \times Fertilizer[kg]$$

$b_0 = 8[t]$

$b_1 = 3[\frac{t}{kg}]$

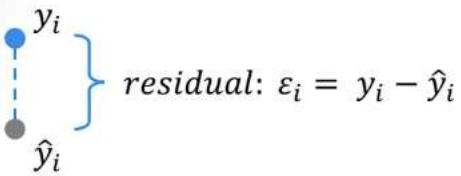


Ordinary Least Squares



Simple Linear Regression

Ordinary Least Squares:



$\hat{y} = b_0 + b_1 X_1$

b_0, b_1 such that:

$SUM(y_i - \hat{y}_i)^2$ is minimized