MSE vs MAE

$$\text{Error/Residual} = \frac{1}{n}\sum_{i=1}^{n} (\hat{y}_i - y_i)^2$$

→ Cost function / Loss function

$\hat{y}_i = mx + c$ —— Error ≈ 0

$$m_{new} = m_{old} - \eta * \frac{\delta E}{\delta m}$$

$$c_{new} = c_{old} - \eta * \frac{\delta E}{\delta c}$$

$$\begin{cases} \dfrac{\delta E}{\delta c} = \dfrac{2}{n}\displaystyle\sum_{i=1}^{n} (\hat{y}_i - y_i) \\ \dfrac{\delta E}{\delta m} = \dfrac{2}{n}\displaystyle\sum_{i=1}^{n} (\hat{y}_i - y_i)\, x_i \end{cases}$$

MSE (Mean Squared Error)

$$MSE = \frac{1}{n}\sum_{i=1}^{n}(\hat{y}_i - y_i)^2$$

MAE (Mean Absolute Error)

$$MAE = \frac{1}{n}\sum_{i=1}^{n}|\hat{y}_i - y_i|$$

More robust to outliers

EDA (Exploratory Data Analysis)

Box Plot ← outliers ← Too many