

# Simple Linear Regression

# Regressions

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Simple  
Linear  
Regression

$$y = b_0 + b_1 * x_1$$

# Regressions

## Simple Linear Regression

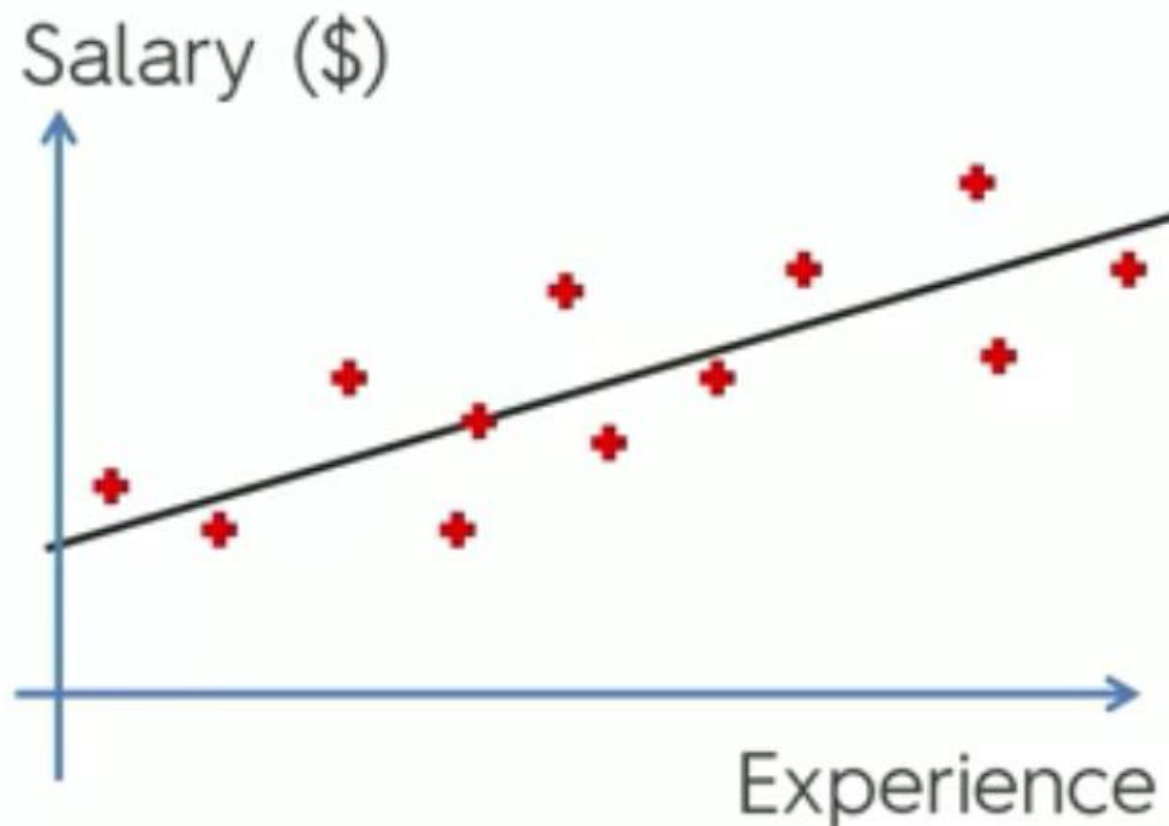
Constant                      Coefficient

$$y = b_0 + b_1 * x_1$$

Dependent variable (DV)      Independent variable (IV)

# Regressions

Simple Linear Regression:



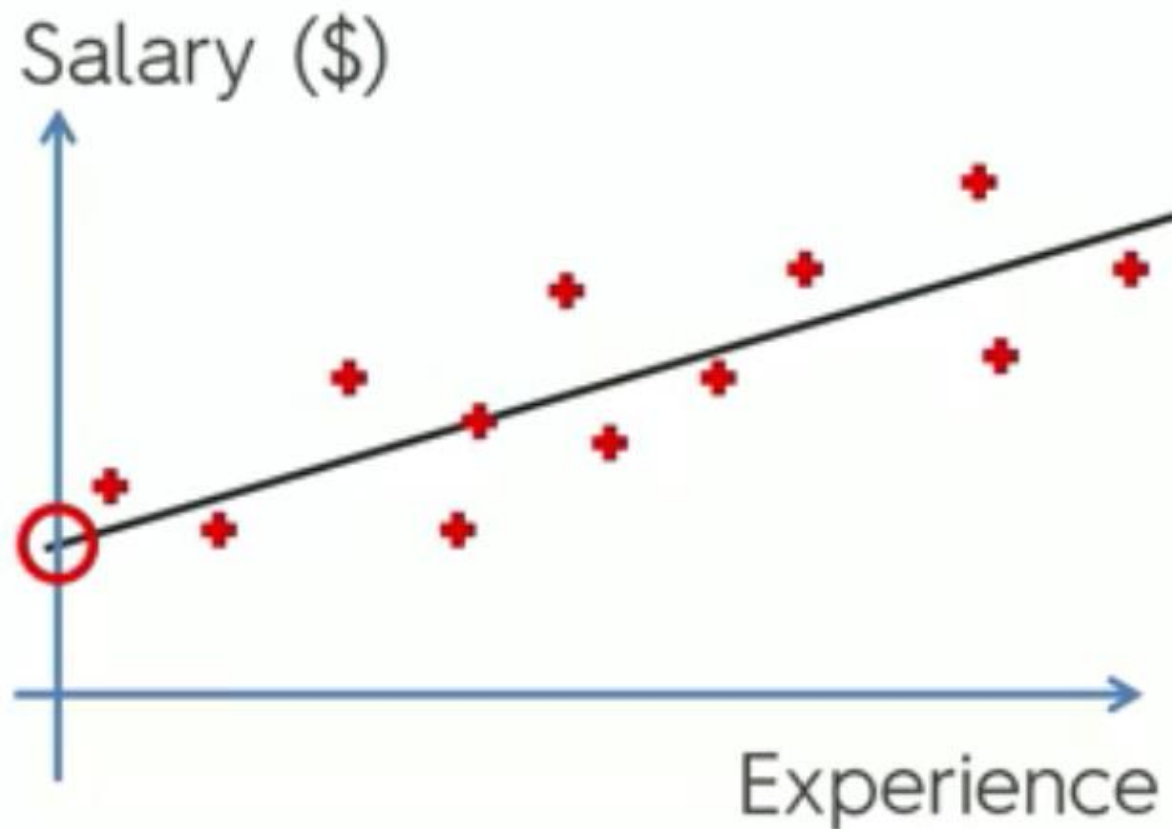
$$y = b_0 + b_1 * x$$



$$\text{Salary} = b_0 + b_1 * \text{Experience}$$

# Regressions

Simple Linear Regression:



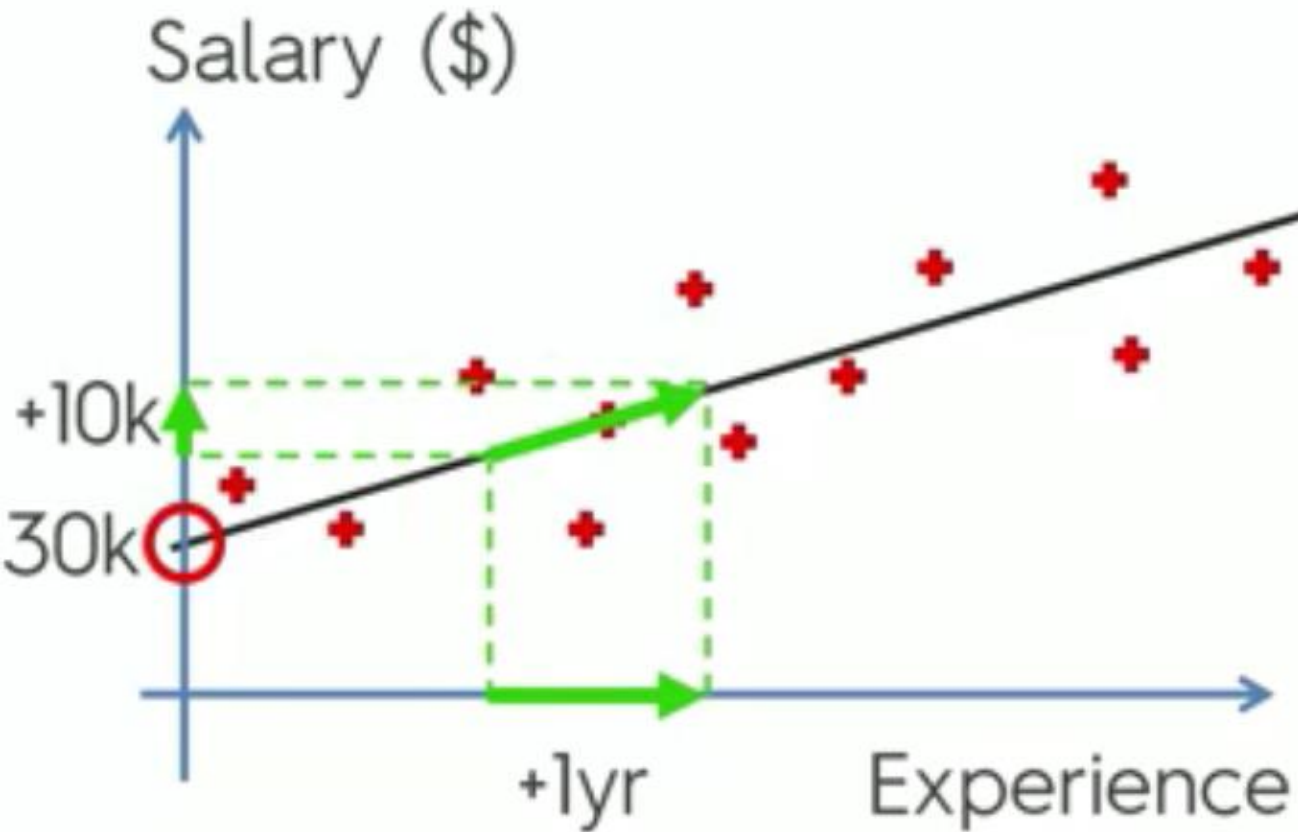
$$y = b_0 + b_1 * x$$



$$\text{Salary} = \textcircled{b_0} + b_1 * \text{Experience}$$

# Regressions

Simple Linear Regression:



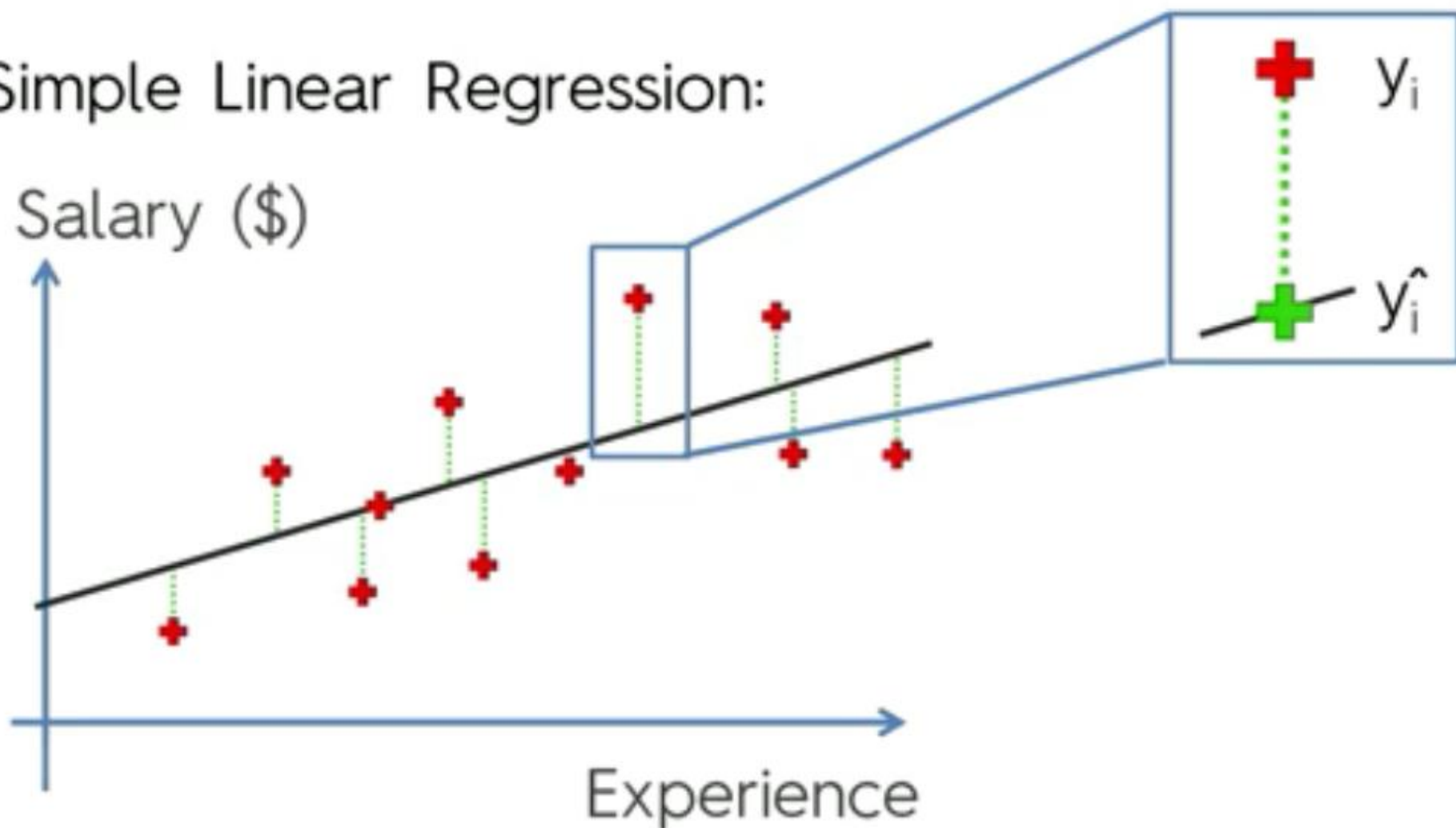
$$y = b_0 + b_1 * x$$



$$\text{Salary} = b_0 + b_1 * \text{Experience}$$

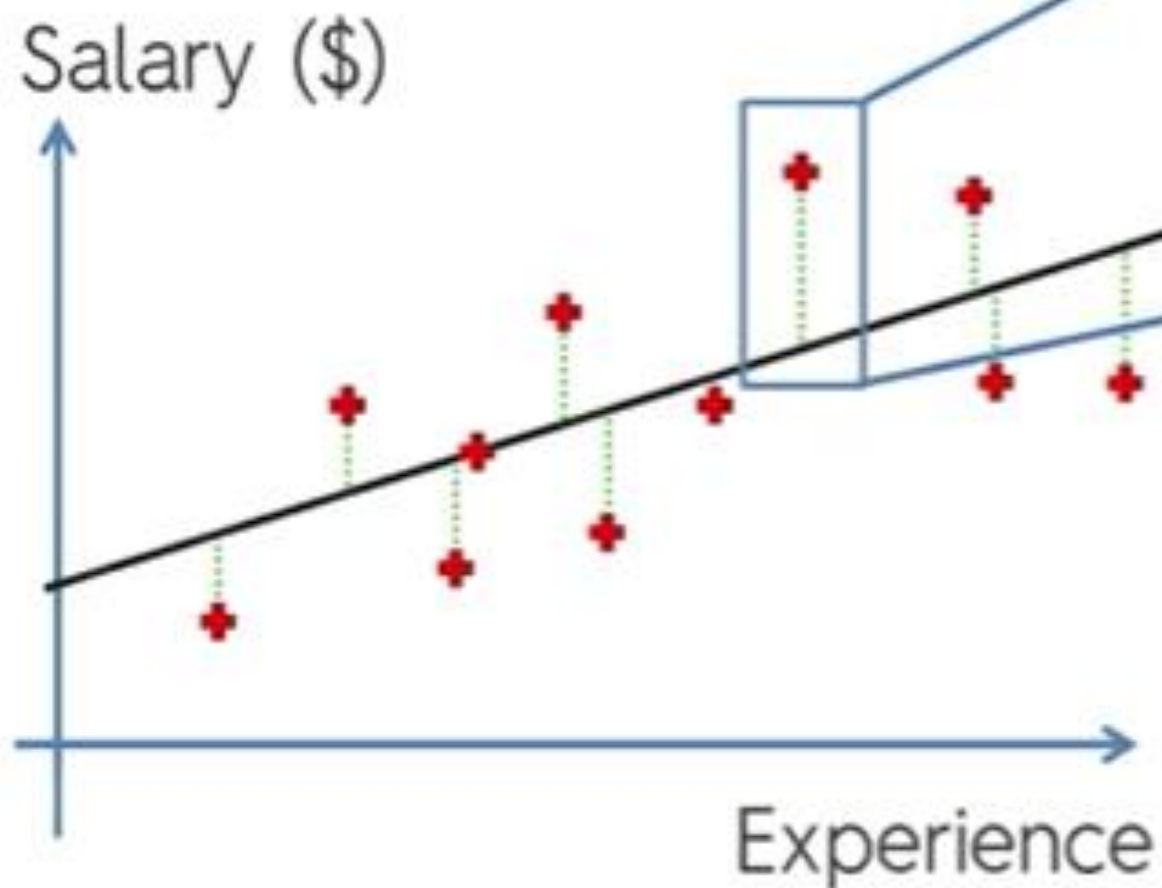
# Ordinary Least Squares

Simple Linear Regression:



# Ordinary Least Squares

Simple Linear Regression:



$$\text{SUM } (y - \hat{y})^2 \rightarrow \min$$