

Regressions

Simple
Linear
Regression

$$y = b_0 + b_1 * x_1$$

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Dependent variable (DV)

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Dependent variable (DV)

Independent variable (IV)

Regressions

Simple Linear Regression

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Diagram illustrating the components of the Simple Linear Regression equation:

- y is labeled as the **Dependent variable (DV)**.
- b_1 is labeled as the **Coefficient**.
- x_1 is labeled as the **Independent variable (IV)**.

Dependent variable (DV) Independent variable (IV)

Regressions

Simple Linear Regression

$$y = b_0 + b_1 * x_1$$

Diagram illustrating the components of the Simple Linear Regression equation:

- Constant**: Points to b_0
- Coefficient**: Points to b_1
- Dependent variable (DV)**: Points to y
- Independent variable (IV)**: Points to x_1

Dependent variable (DV) Independent variable (IV)

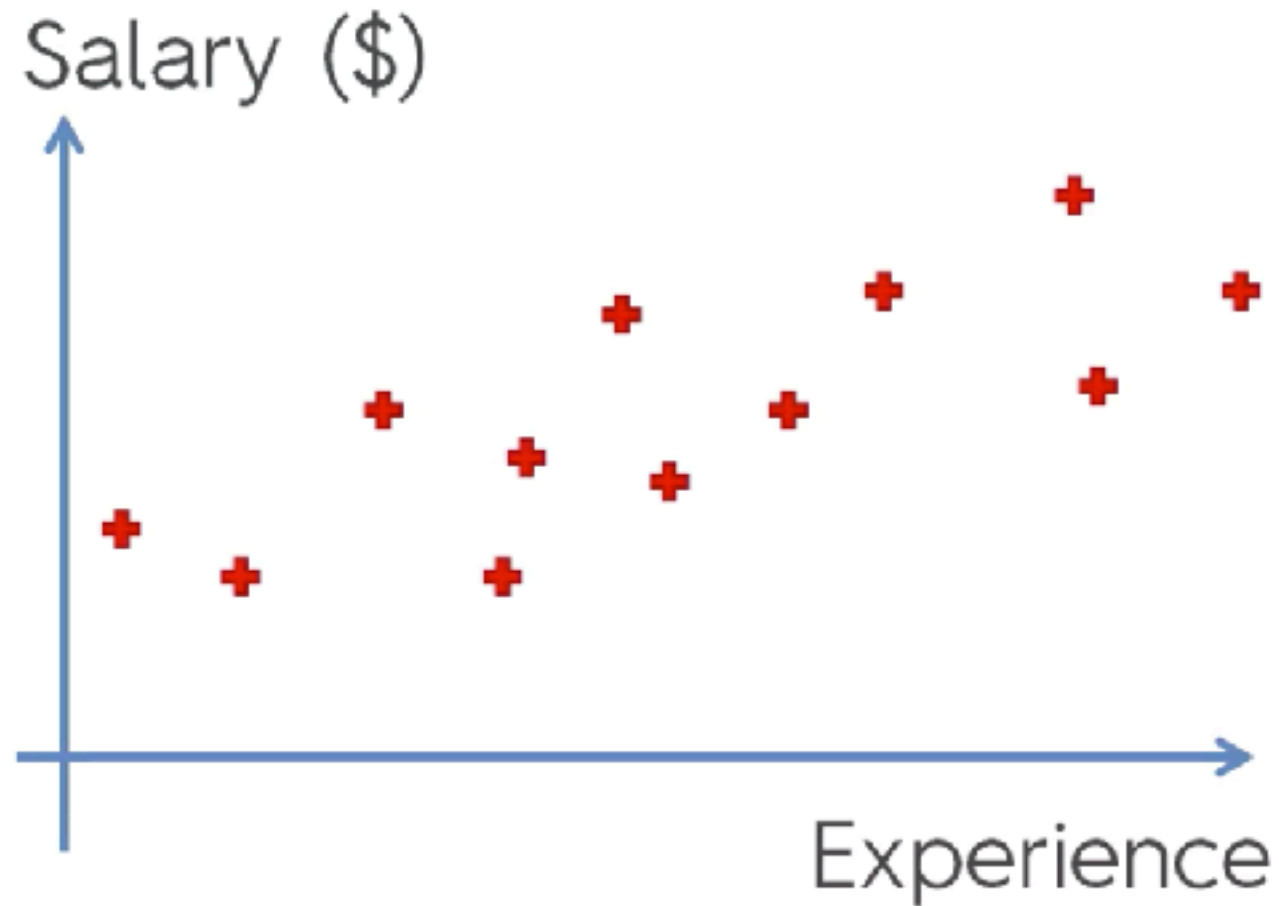
Regressions

Simple Linear Regression:



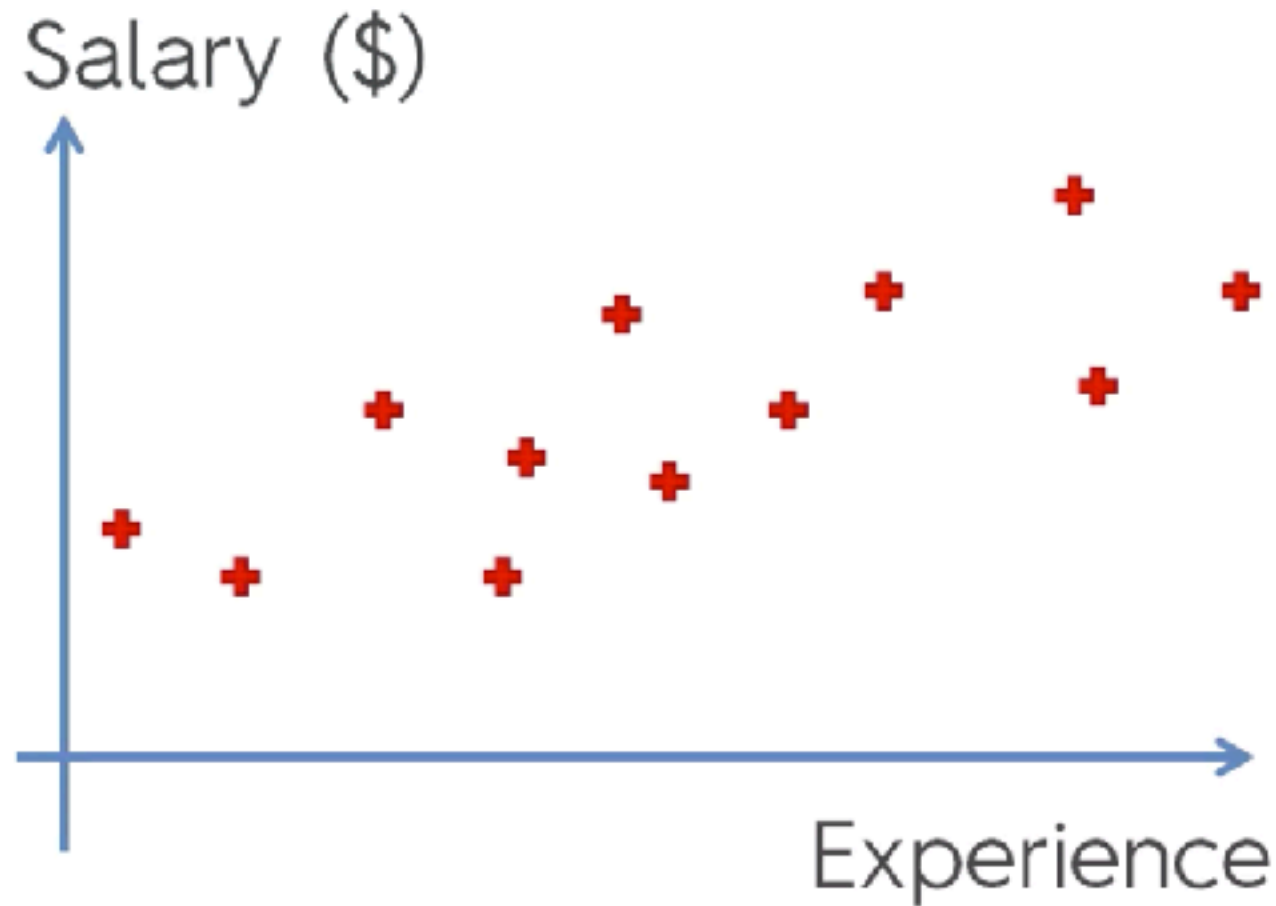
Regressions

Simple Linear Regression:



Regressions

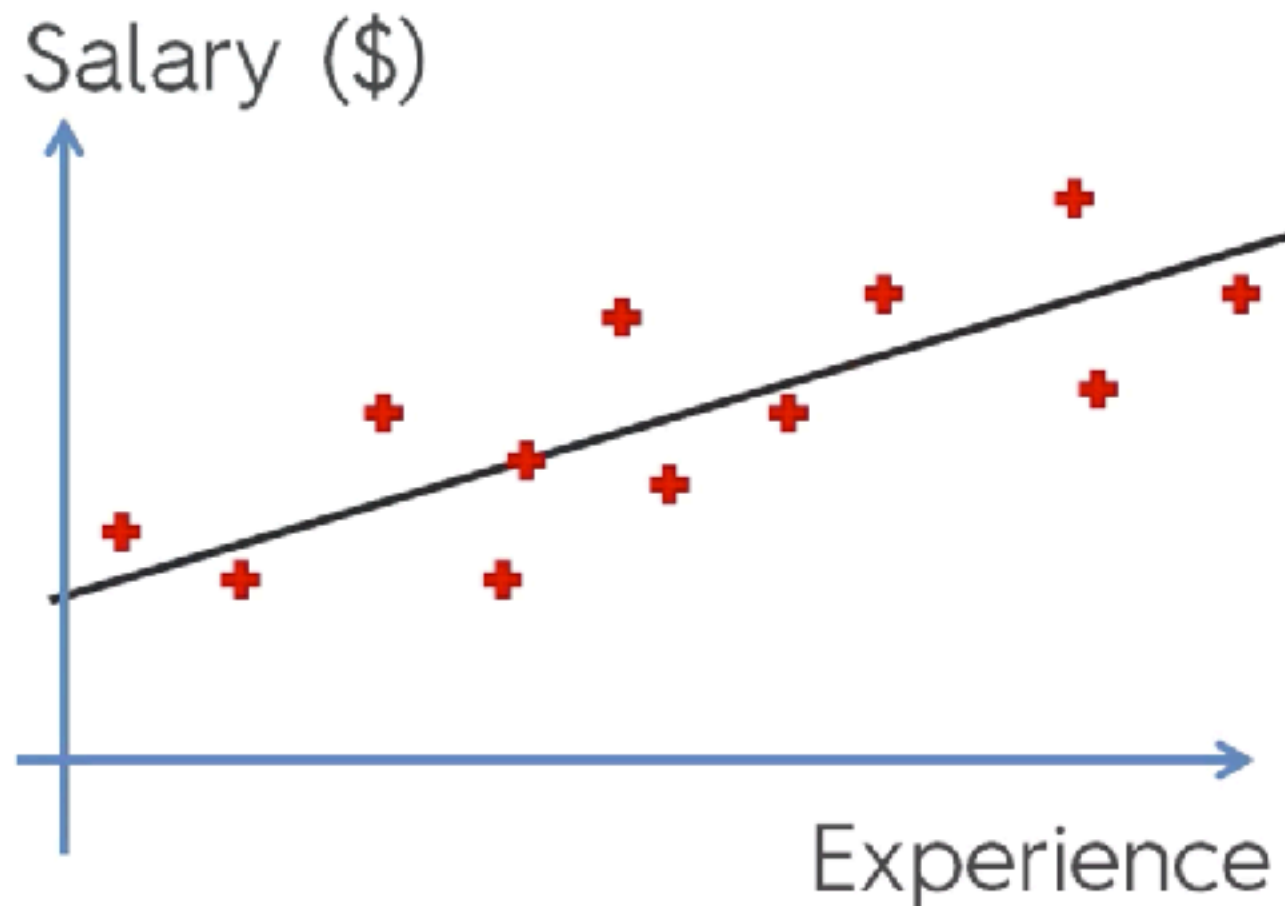
Simple Linear Regression:



$$y = b_0 + b_1 x$$

Regressions

Simple Linear Regression:



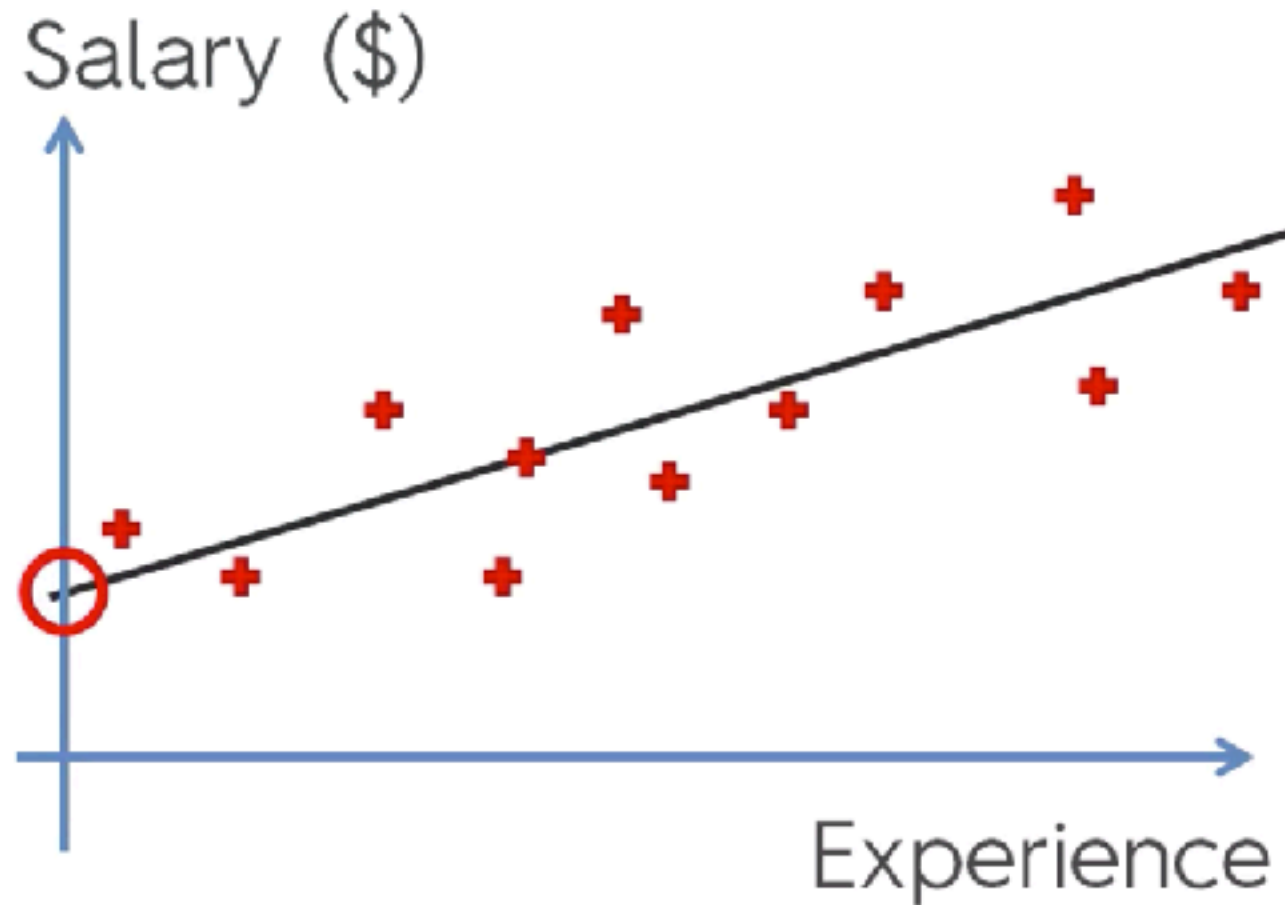
$$y = b_0 + b_1 * x$$



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

Regressions

Simple Linear Regression:



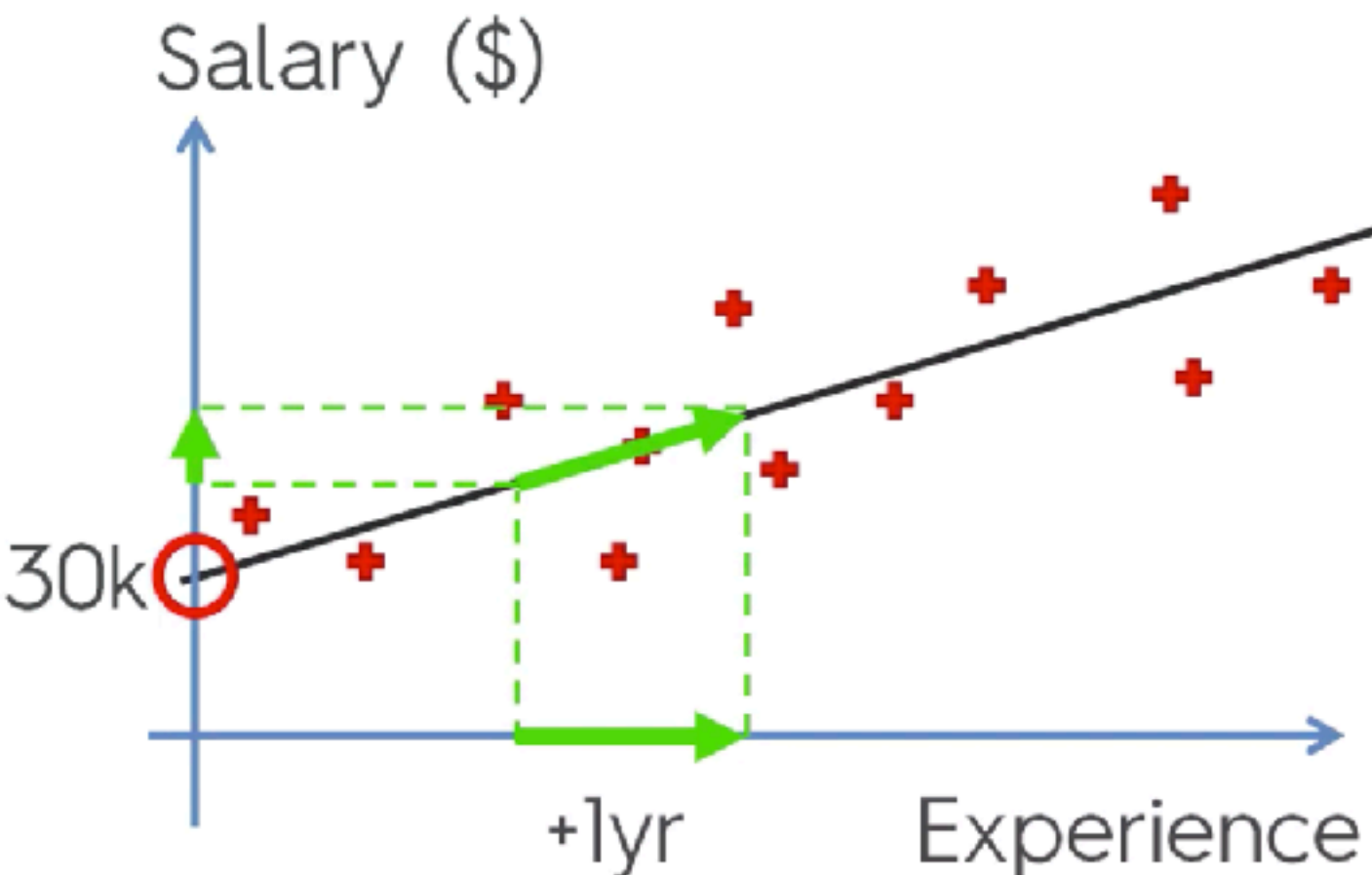
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Simple Linear Regression:



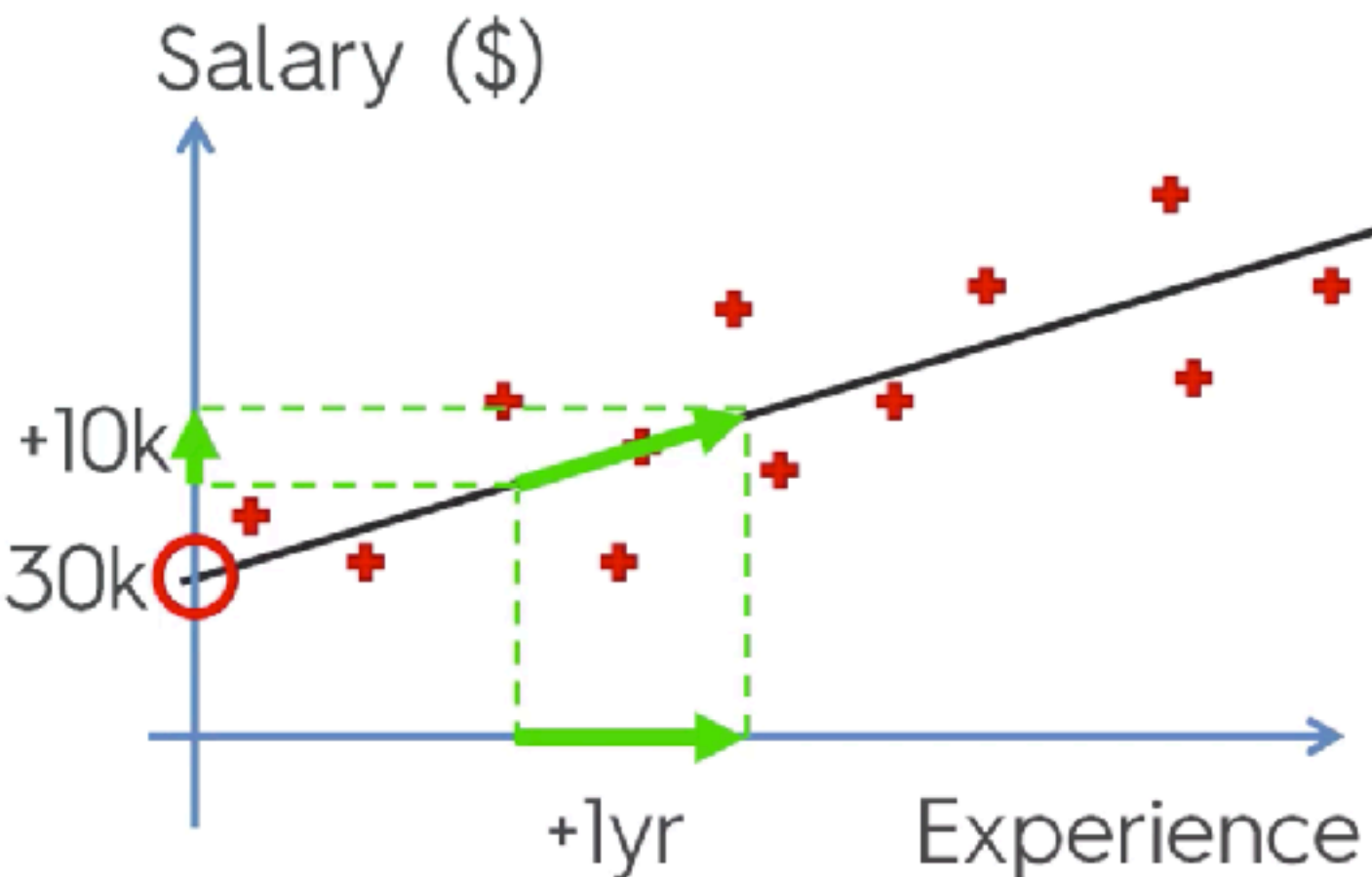
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Simple Linear Regression:



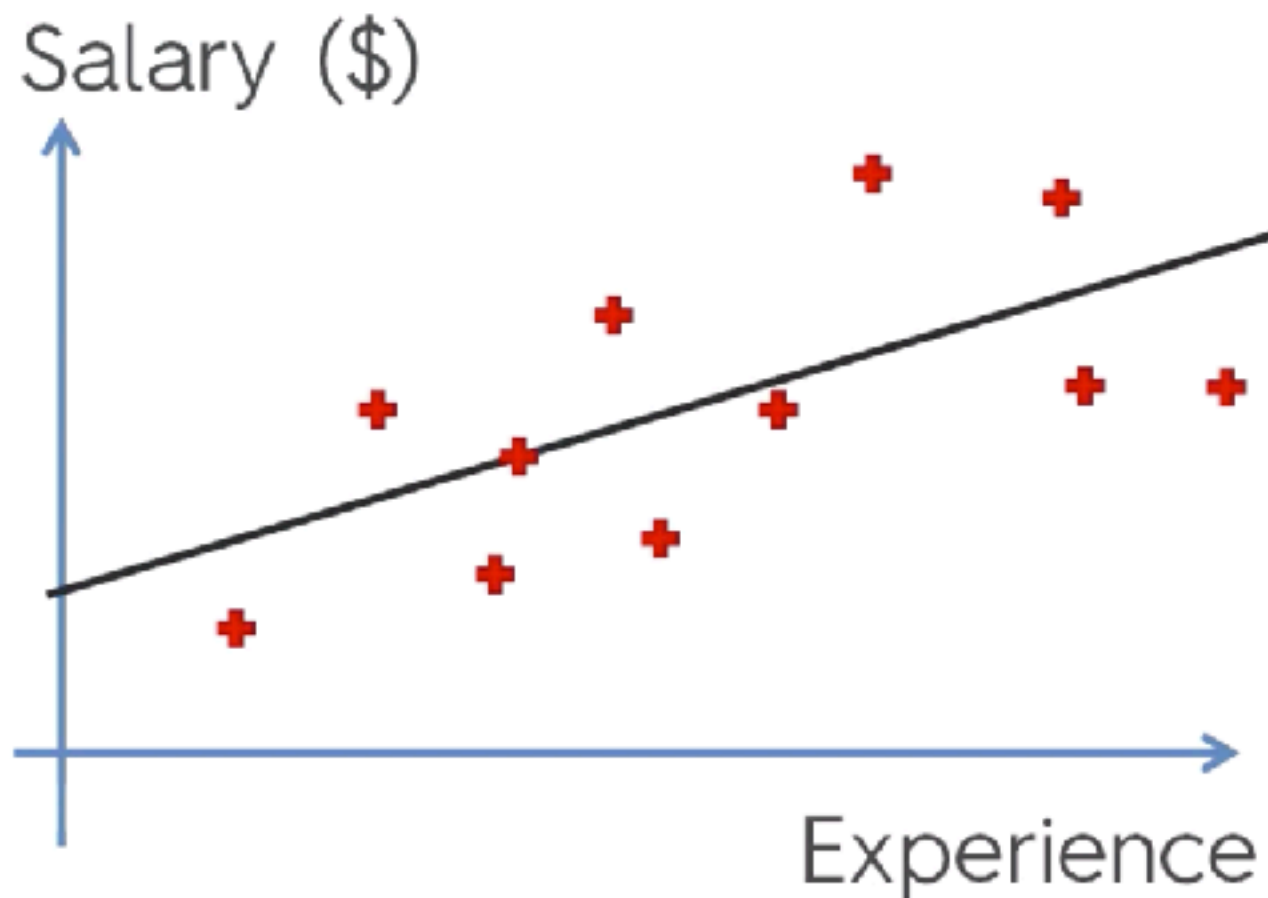
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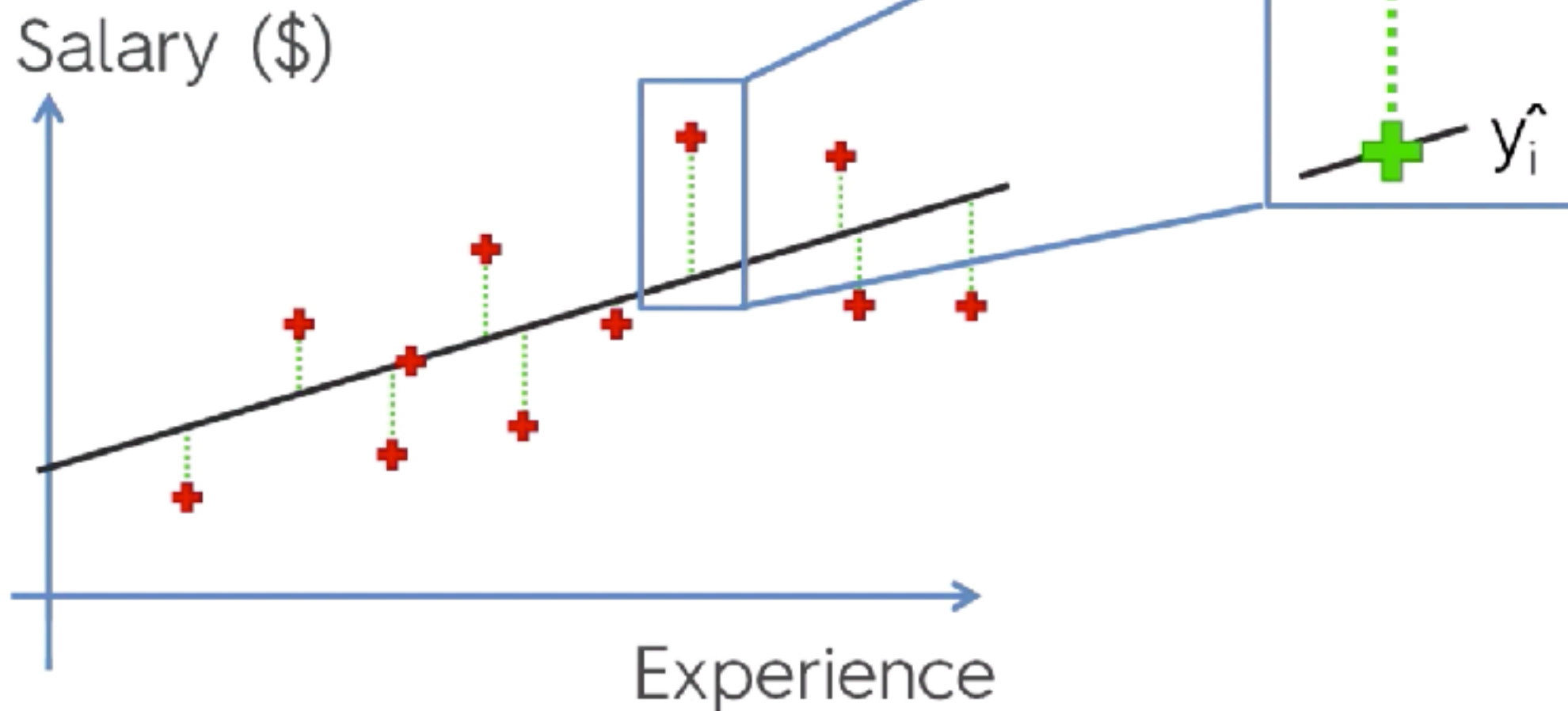
Ordinary Least Squares

Simple Linear Regression:



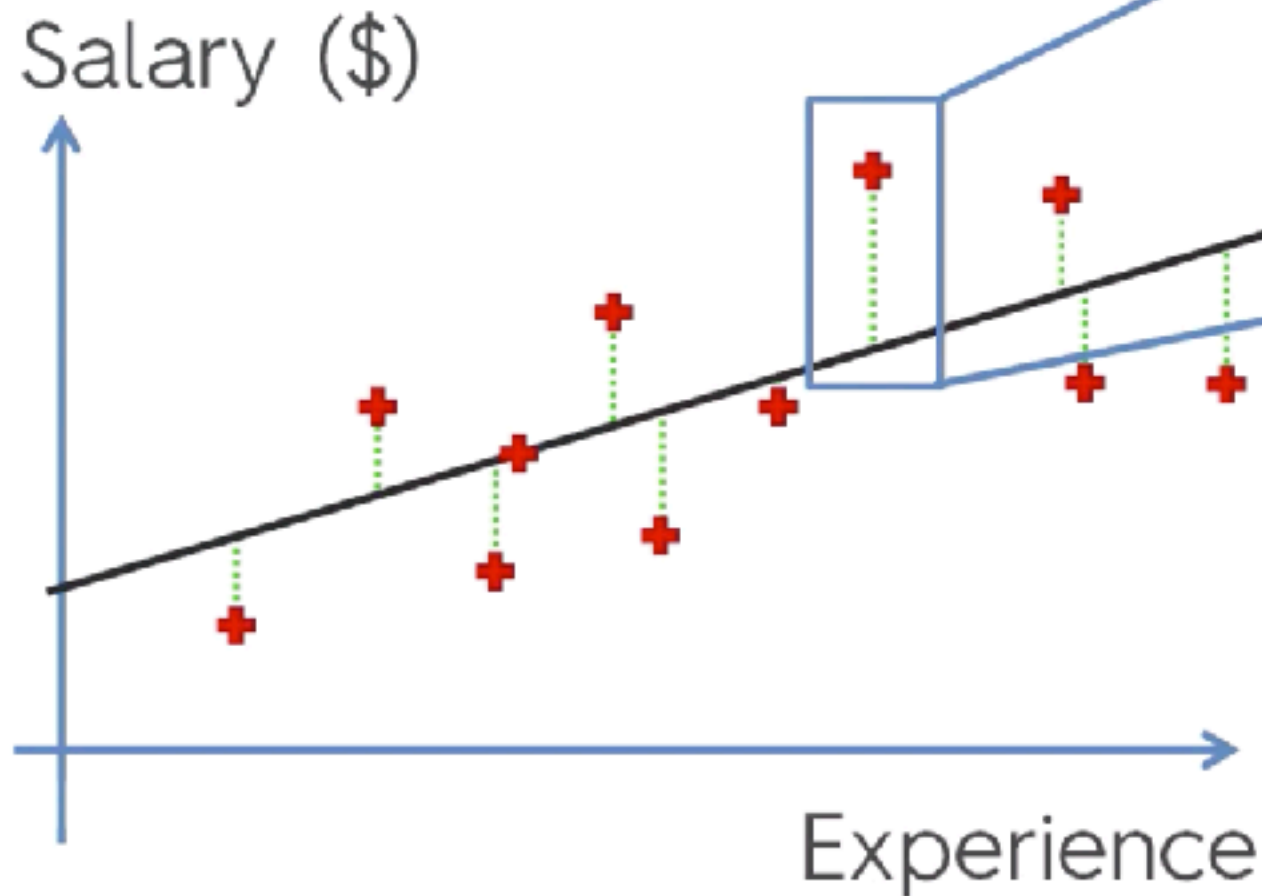
Ordinary Least Squares

Simple Linear Regression:



Ordinary Least Squares

Simple Linear Regression:



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