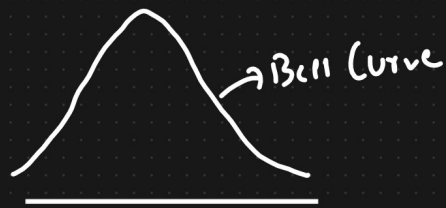


Log Normal Distribution

68-95-99.7 Empirical

$$X \sim N(\mu, \sigma)$$



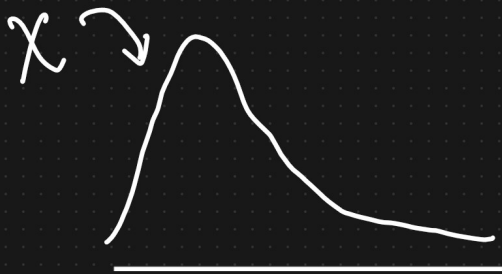
$(\log)_{10}$

$$X \sim \text{Log Normal Distribution}$$

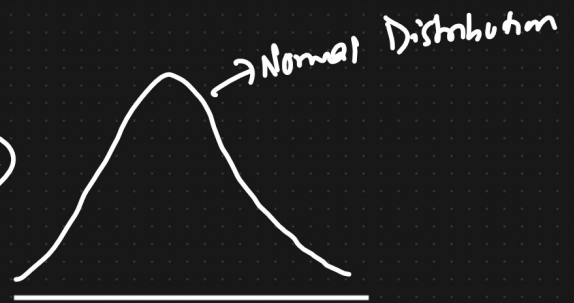


Then  $Y = \ln(X)$  have a Normal Distribution

$\ln = \log_e$   $\Rightarrow$  natural logarithm



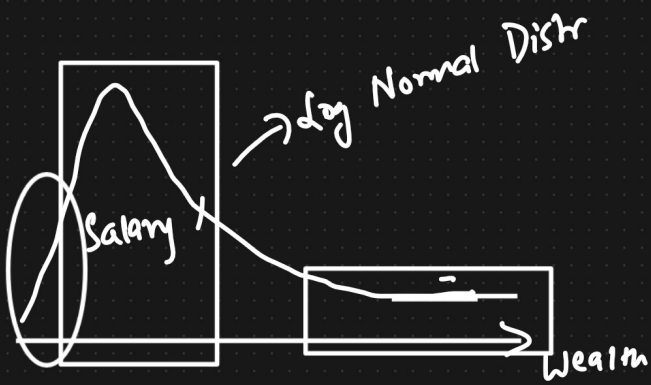
$$\Rightarrow \ln(X) \Rightarrow$$



$$X \sim \text{Log Normal Distribution}$$

EDA, Feature Engineering

$$\left\{ \begin{array}{l} Y = \ln(X) \\ X = \exp(Y) \end{array} \right. \checkmark \checkmark \checkmark$$



Eg:

- ① wealth distribution
- ② length of the comments  
in my channel
- ③ Salaries