

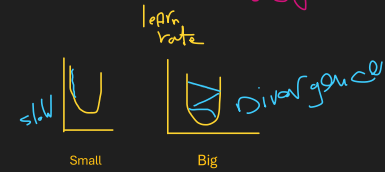
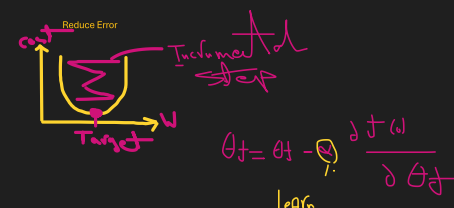
$y = b_0 + b_1x$

Linear Reg

Cost Function $\rightarrow J(\theta) = \frac{1}{2m} \sum (h_0(x^{(i)}) - y^{(i)})^2$

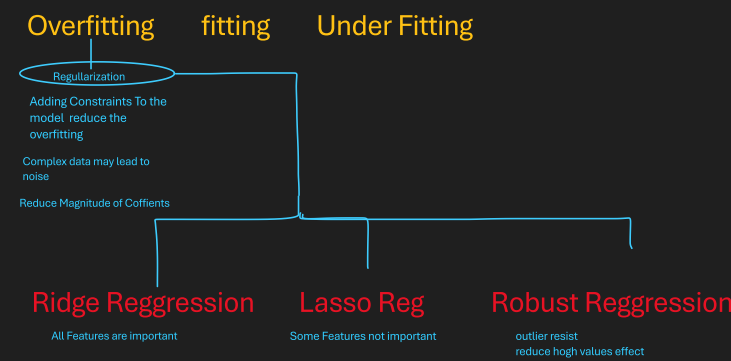
prediction

Gradient Descent



$y = b_0 + b_1x_1 + b_2x_2 + b_3x_3$

Polynomial Reg



Metrics of regression models

R^2

$1 - \frac{\sum (y - \hat{y})^2}{\sum (y - \bar{y})^2}$

$1 = \text{All variance}$

$0 = \text{Mean}$

$\odot = \text{Worse than Random guess}$

$\text{MAE} \rightarrow \frac{1}{n} \sum |y - \hat{y}|$

$\text{MSE} \rightarrow \frac{1}{n} \sum (y - \hat{y})^2$

$\text{RMSE} = \sqrt{\text{MSE}}$

variables , ranges , big diff

