V_1	V_2	V_3	V_4
100%	50%	20%	40%
5	2.5	1	2

$$y = mx + c$$

$$y = m_1 x_1 + m_2 x_2 + m_3 x_3 \ldots \ldots m_n x_n + c$$

x_1, x_2, x_3 = ind f-eature

m_1, m_2, m_3 = wts or magnitude or Features

c = intercept.

$$MSE = \frac{\Sigma (y_a - y_p)^2}{n} = Loss$$

Regularization

1) Ridge regression / regularization / L_2 regularization

L2-norm

2) Lasso regression / regularization / L1 regularization

L1-norm

Linear regression

$$= \frac{\sum (y_a - y_p)^2}{n} + \lambda \times \left(\sum (w)^2 \right)$$

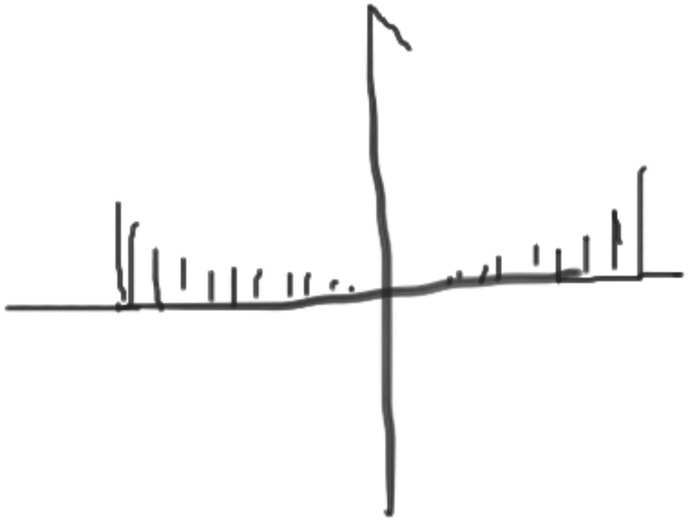
MSE
SSE
RSS
} Loss + $\alpha \times$ (Coeff of x | Slope of line)^2

α = Penalty to accuracy

Loss = MSE

v_1 $\alpha = 0.01$

$v_2 = \alpha = 2$



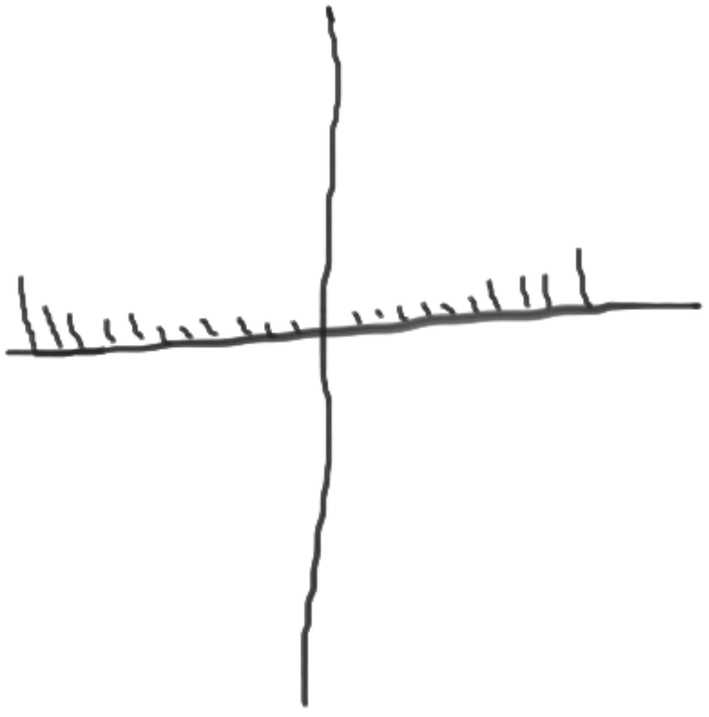
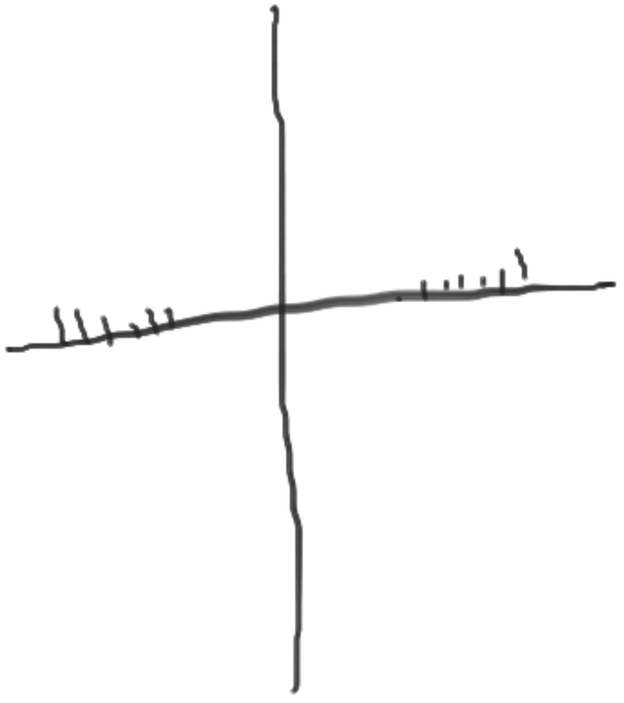
v_3 $\alpha = 5$

wts

shrinking of wts

$\alpha = 0.05$

$\alpha = 1$



$\alpha = 3$