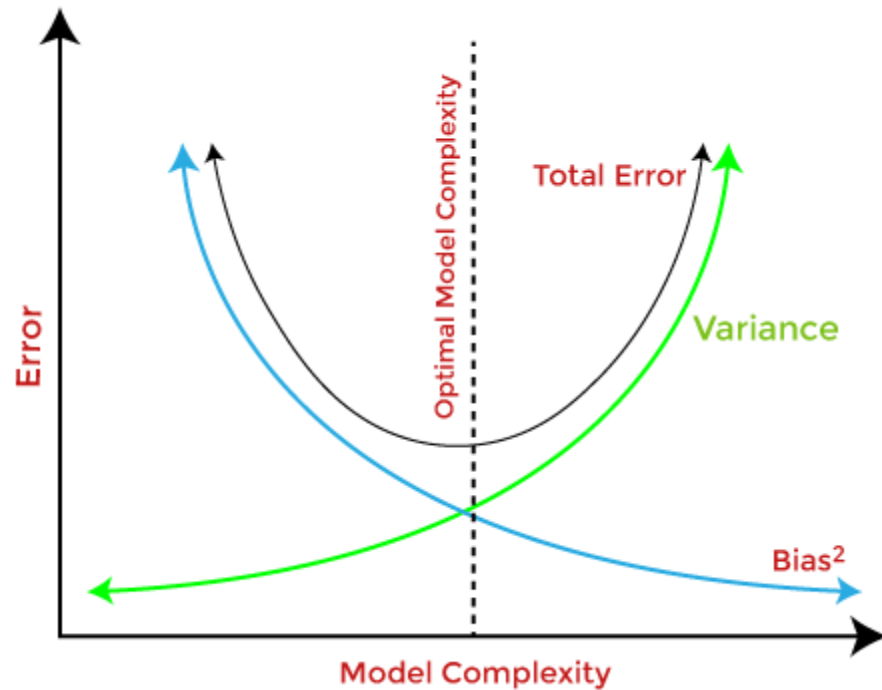# Regularisation Lasso

UTKARSH GAIKWAD
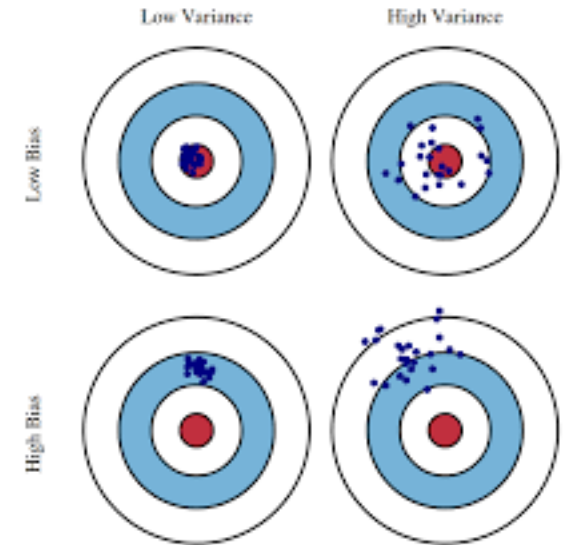
CLASS STARTING SHARP AT 8:05 PM

Bias Variance Tradeoff

Underfitting :
High Training Error
High Testing Error
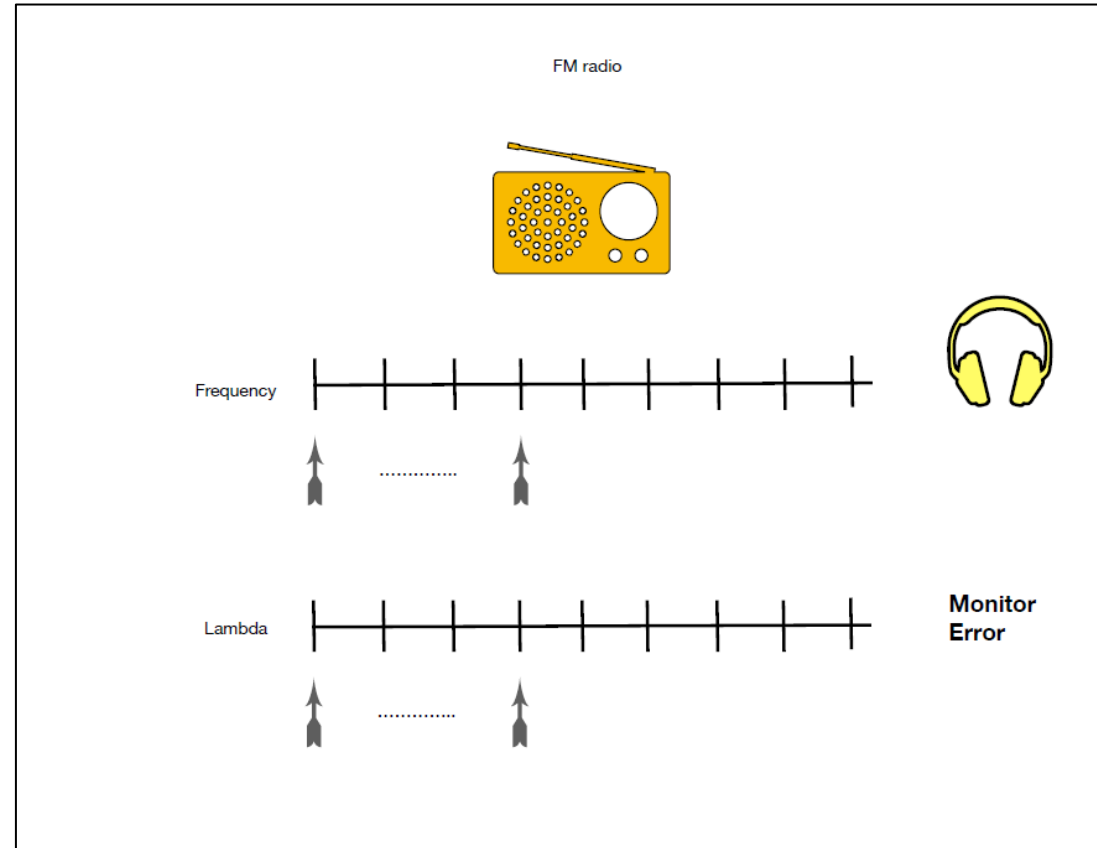
Overfitting :
Low Training Error
High Testing Error

Lasso (L1 Regularisation)

$$\sum_{i=1}^{n} \left(y_i - \beta_0 - \sum_{j=1}^{p} \beta_j x_{ij} \right)^2 + \lambda \sum_{j=1}^{p} |\beta_j| = \text{RSS} + \lambda \sum_{j=1}^{p} |\beta_j|.$$

Ridge (L2)
Penalty on Square of coefficients

Lasso (L1)
Penalty on Absolute value

Lambda Is parameter which we need to find

Thank you

FOR ANY QUERIES PING ME ON SKYPE