

Course -3

Week -1

1) Orthogonalisation

By the help of this we can improve our algo in a way that not many things change, remember radio TV eg.

2) Single ^{Real} no. evaluation metric

It is like movie Moneyball we have to funnel down everything to just one no.

F1 score is used, F1 score = Harmonic mean of Precision & Recall

$$= \frac{2}{\frac{1}{P} + \frac{1}{R}}$$

3) Optimizing & Satisficing

In this we optimize one metric to set an upper or low metric for all others (satisfy others)

→ Bayes optimal error - minimum error / best possible error (eg: 0.0001%)

Avoidable bias - diff. in human biases ~~error~~ training

Variance - diff. in training to dev set

If humans are better then it is considered proxy of Bayes error.

4) To Reduce

Avoidable bias

Variance

- Train bigger model

- More data

- Train longer/better optimization techniques

- Regularisation

- NN archi. / hyperparameter search

←→ Same