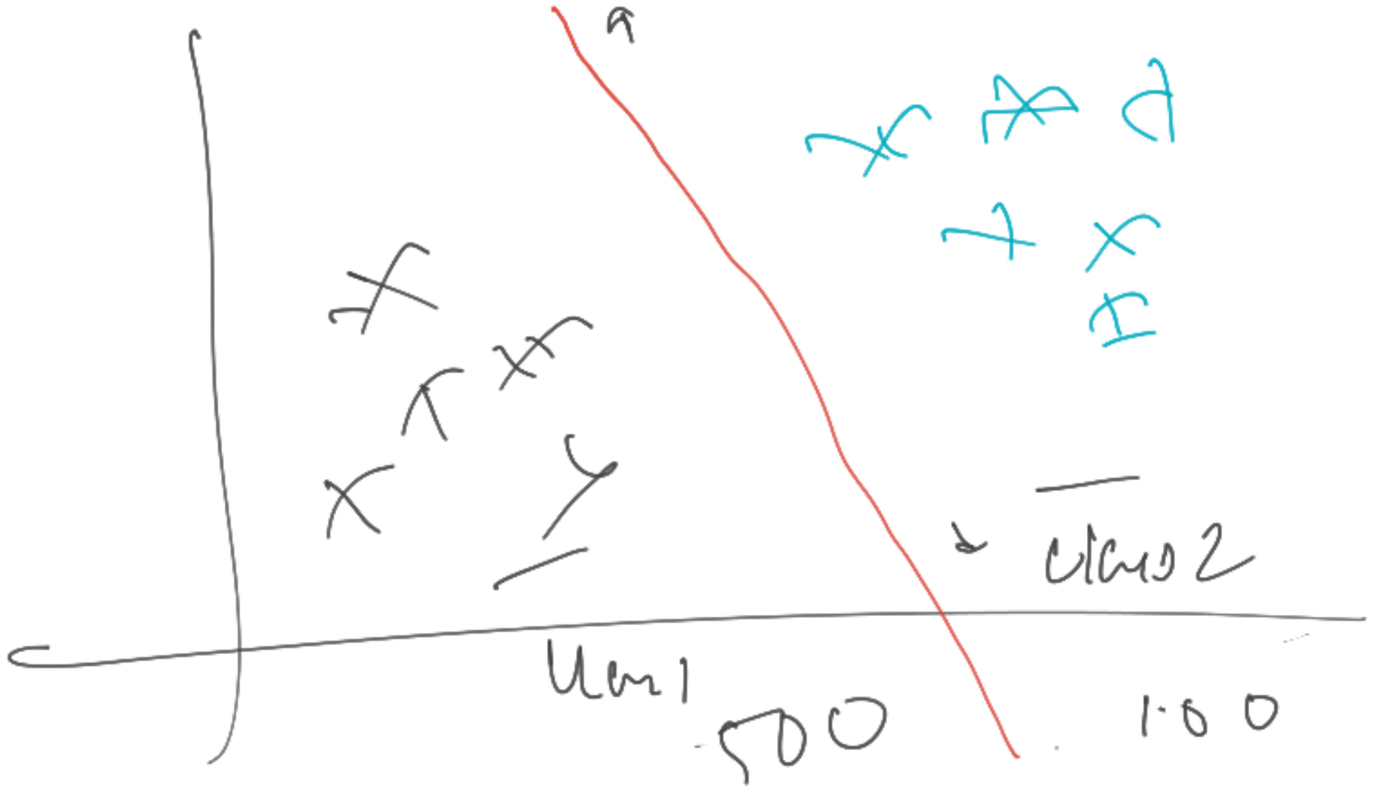
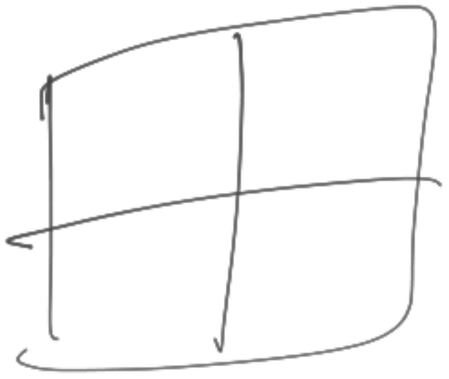


balanced ⇒ accuracy ⇒ 0-1

unbalanced ⇒ confusion matrix

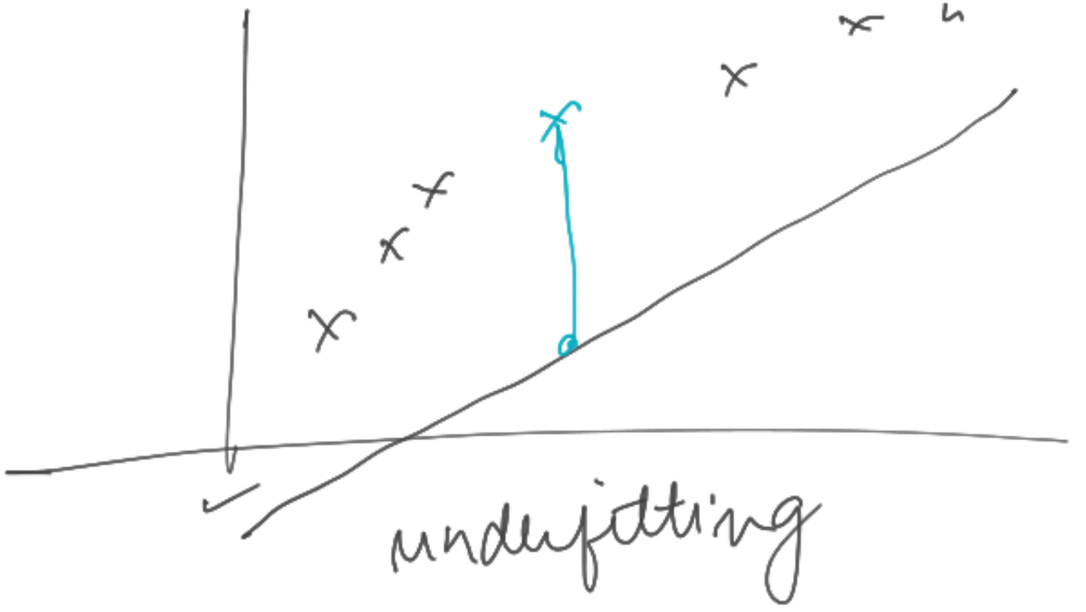
Precision, Recall, F1 score



overfitting

train = less ⇒ bias

test = more variance

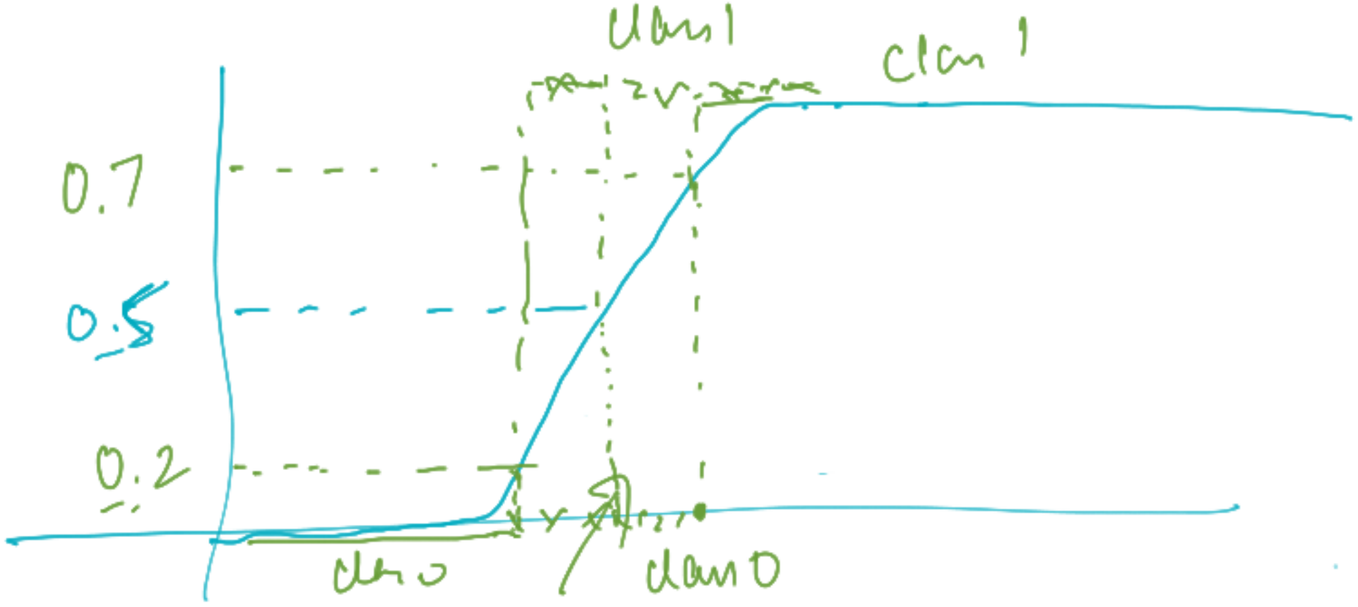


underfitting

train : more

test : more

low bias, low variance



ROC

Reciever Operating curve

AUC

Area Under Curve

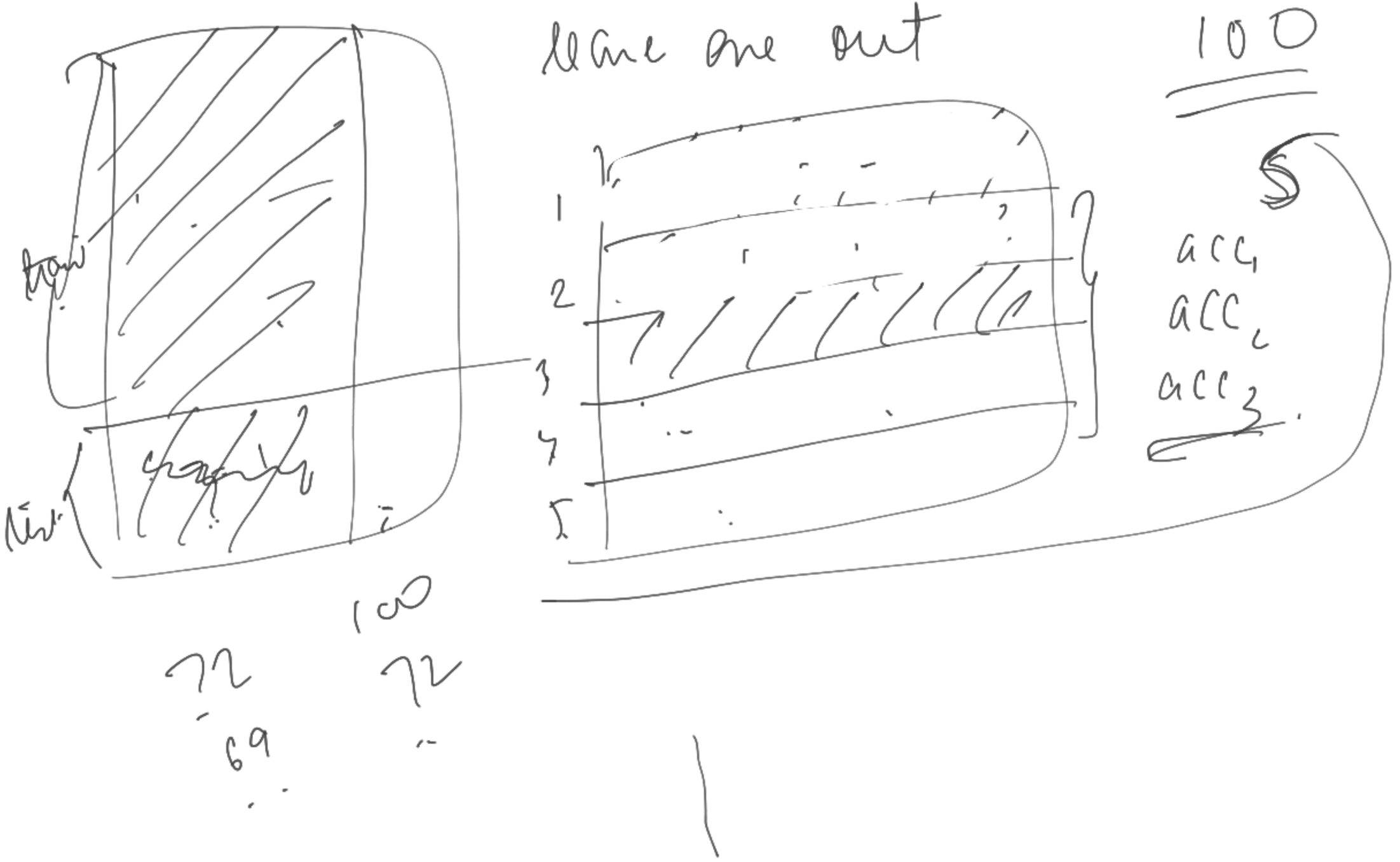
y : 0.2

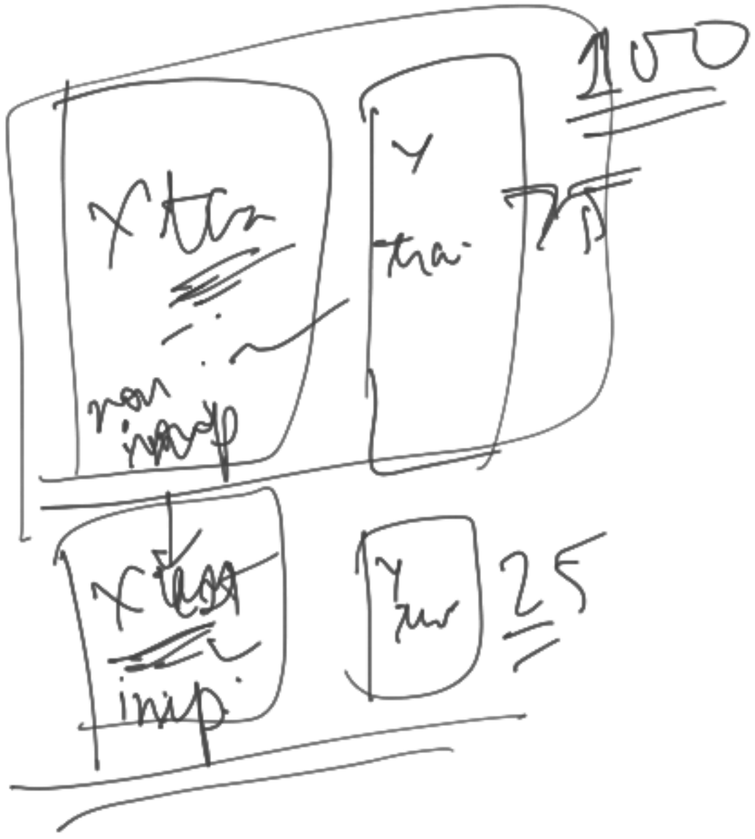
Avoid underfitting:

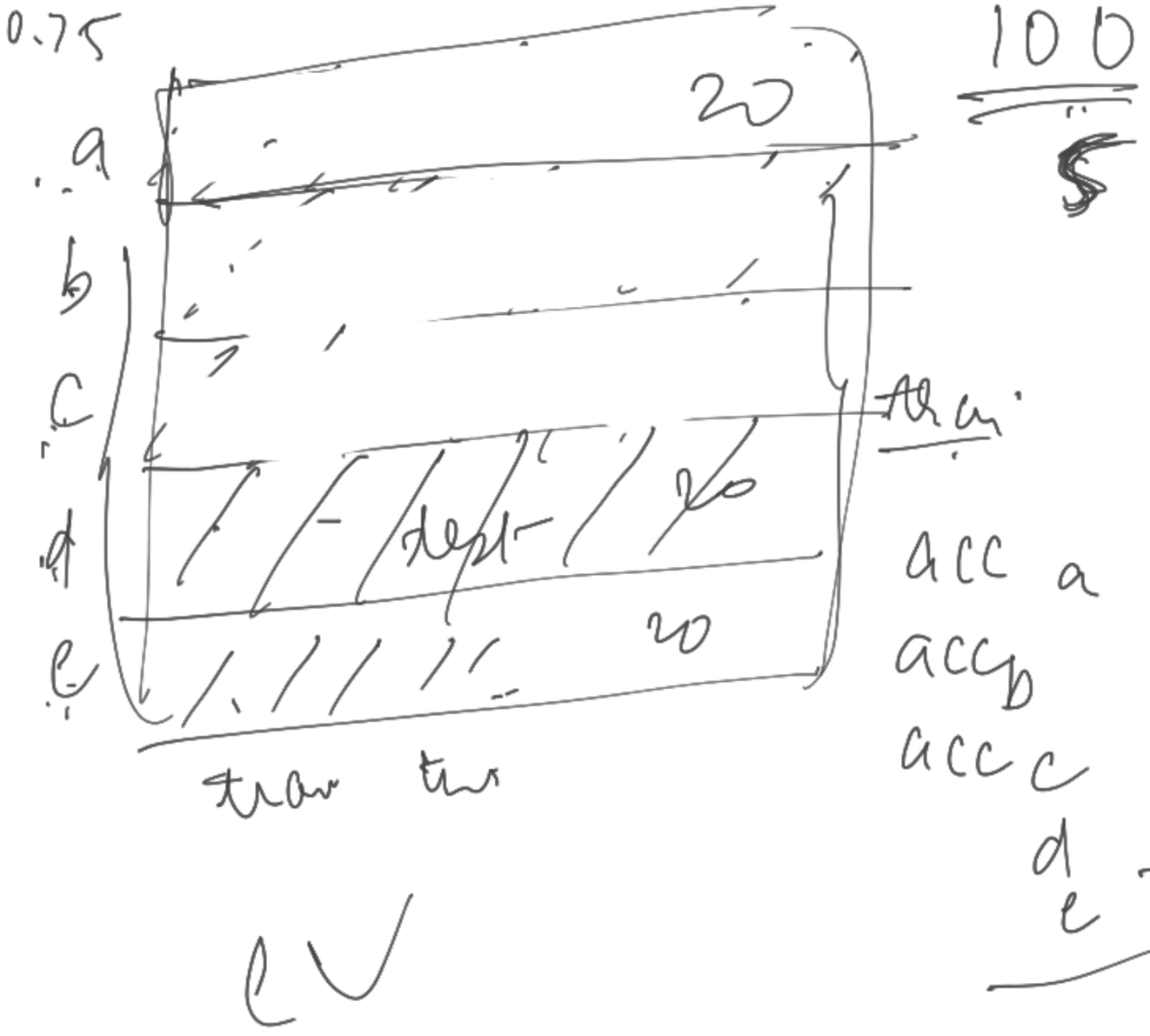
- add more parameter
- remove outliers
- replace missing.
- increase data size
- use correlated feature:

Avoid Overfitting

- reduce parameters
- tune hyperparameters
- use regularization
- remove outlier
- cross validation


leave one out
100
1
2
3
4
5
acc1
acc2
acc3
100
72
72
69


100
25
acc


0.75
100
5
20
a
b
c
d
e
20
acc a
acc b
acc c
d
e 72.1

Multiclass classification

1 vs all