

Overfitting
&
Underfitting

Training dataset

high

0.88

$x_{\text{train}}, y_{\text{train}}$

Testing dataset

low

0.75

$x_{\text{test}}, y_{\text{test}}$

Overfitting :-

Training data Accuracy

High

0.88

Testing data Accuracy

Low

0.75

0.13

0.90

0.95

0.50

0.61

Underfitting is

Training dataset Accuracy :- low 5.60%

Testing dataset Accuracy :- low 60%

V1 V2 V3

A 39 78

B 38 67

C 25 66

T

15

24

23

90

55 60

OF

UP UF

35 72

22.5

60

60 55

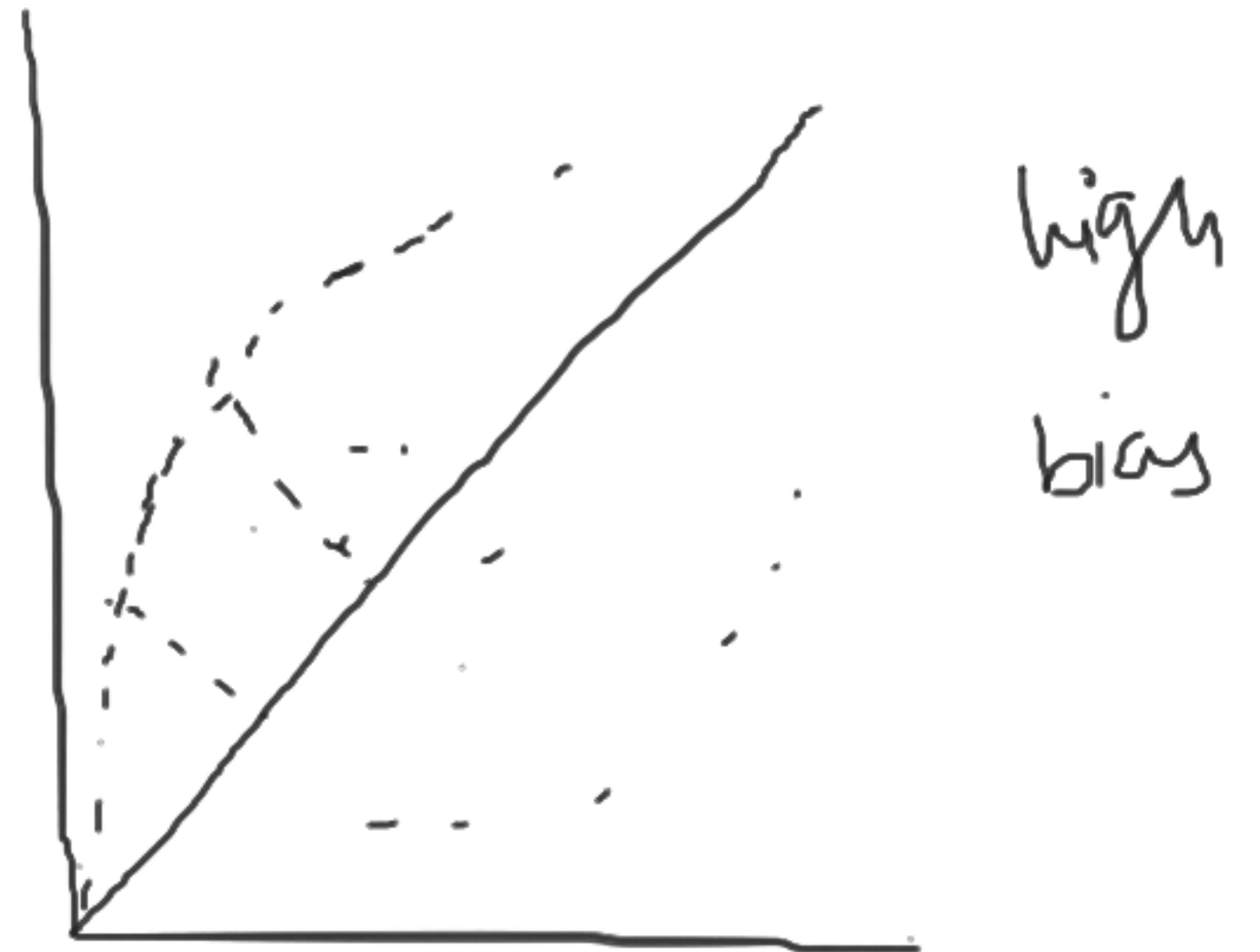
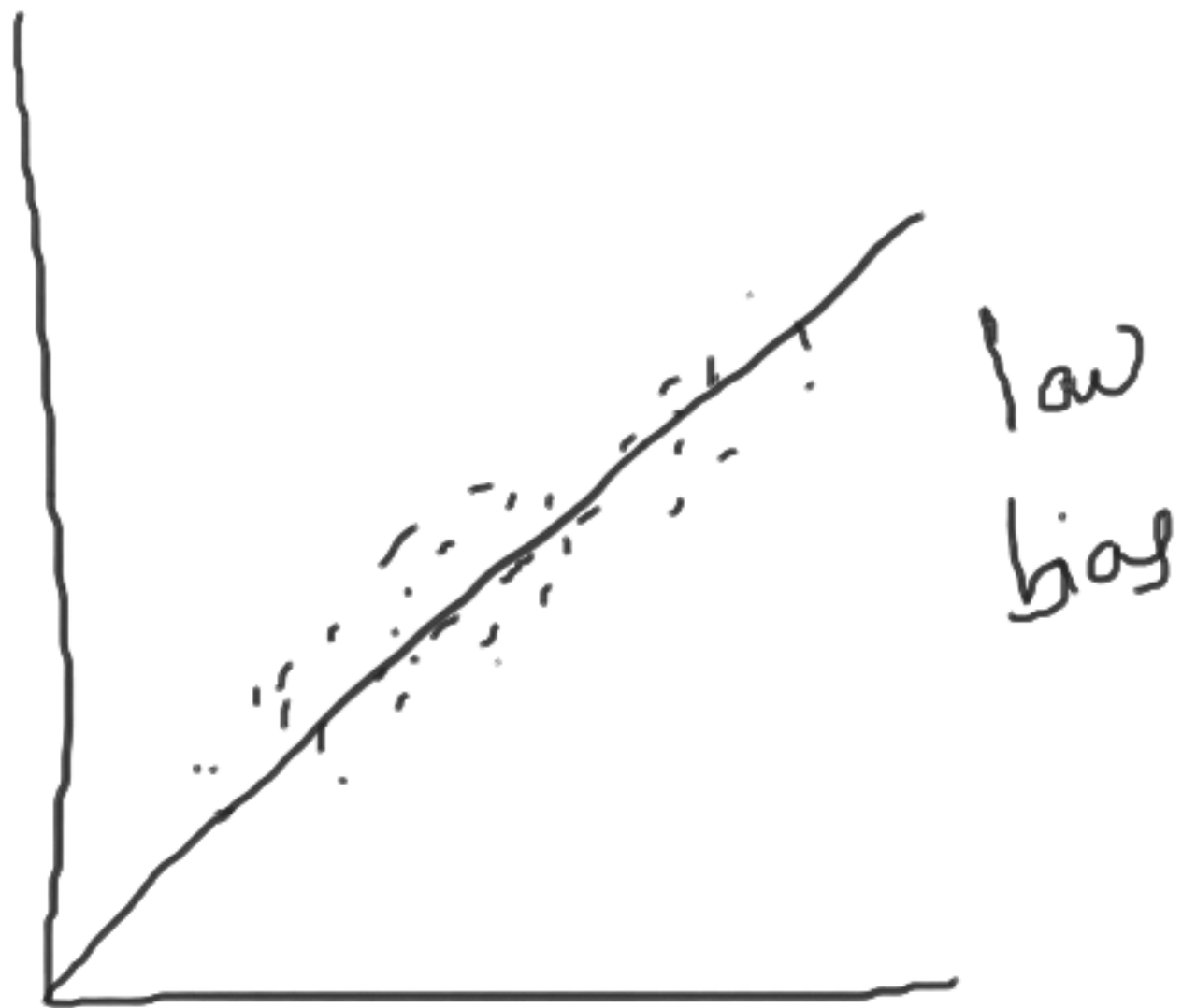
Test
Train

82 } 89
85

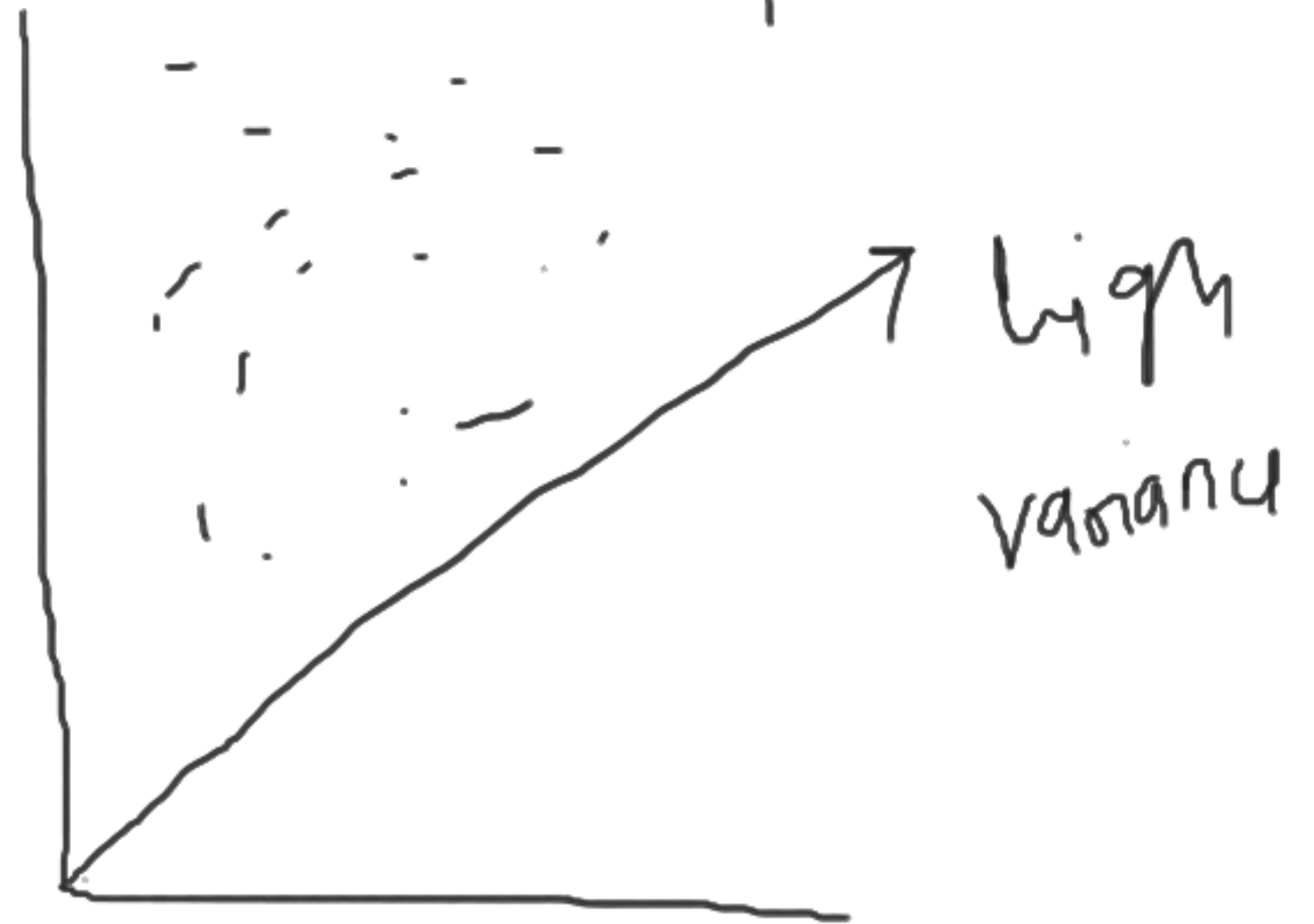
Test 92
Train 91

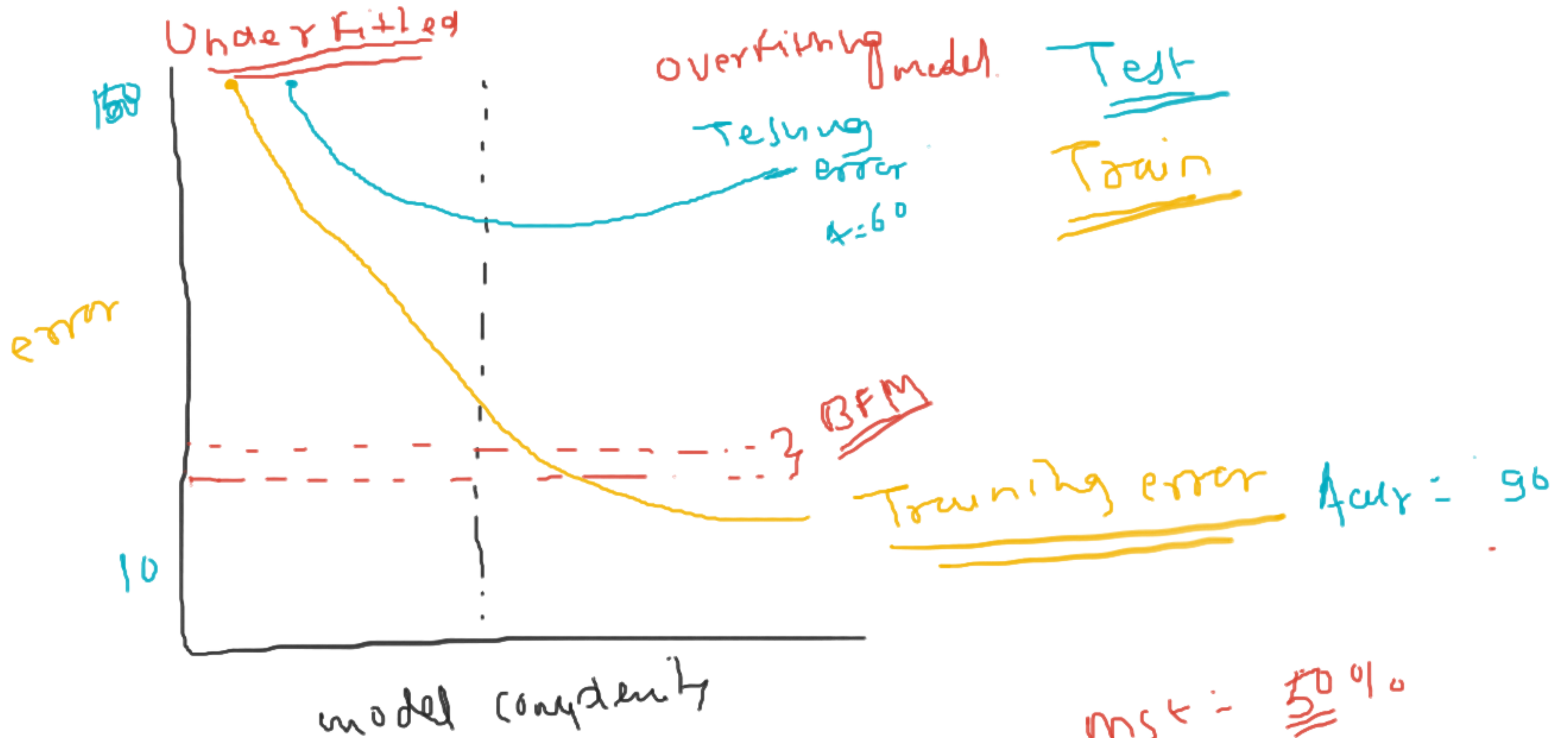
Test 45
Train 30

1) Bias - diff between act & pred



2) Variance \rightarrow How much scattering our value are from
each other w.r.t
prediction





$$msk = \underline{\underline{50\%}}$$

$$WA = \underline{\underline{50\%}}$$

High bias

low bias

low variance

high variance

underfitting



Best model



overfitting

overfitting

1st \Rightarrow Tutorial \rightarrow project \rightarrow 3/4 algo

2-4 yrs

\rightarrow ML LR
Logit

DC }
RF }

2nd \Rightarrow Managerial \Rightarrow

f.s = 60 %

Var = 60 %

F.s = 60 %

A.a = 60 %

\Rightarrow 100 %

9 → 5 4 24 + 4 = 28

28

27

Sat Sunday

29

30

31

3 to 5

16

month 2, 3

POL : 10
S.2

Company policy
spine hrms
Cloudhol Zoho
A source people
Salary & hip
emp UAW

darwin box

9-6

10-7

10-7
11-8

12-9

1-10

ID-card

online

7-5

chip

login

check in

work and

log out

regular / at work

request, money

Verast-
see

hybrid

g

30

1-20

18-15

16-Dec to 15-Jan

30 Jan

{ product base :- →
service base :- →

200
scu.
Pr
new
nl.
r.

split-
100
✓

60

Data leakage.

Train
2;

Test.

Train Test
80 78

prod.
70