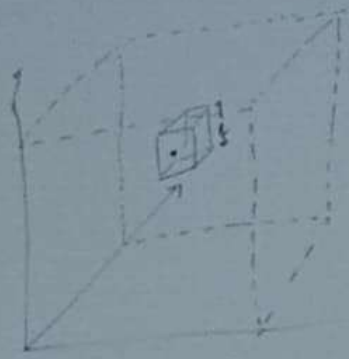


IMPORTANT CONTACT NUMBERS
 1. LINC SECURITY 7977-7267
 2. FIRE 911
 3. HOSPITAL 100-6666
 4. ROAD SECURITY 100

Unit cube $[0, 1]^d$



l : edge length of the smallest hypercube that contains all K neighbors of the test point

$$l^d \approx \frac{K}{n}$$

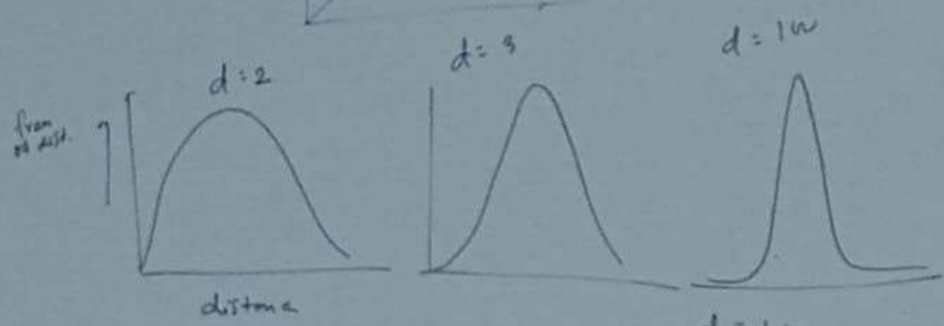
$$l \approx \left(\frac{K}{n}\right)^{1/d}$$

$K=10$
 $n=1000$

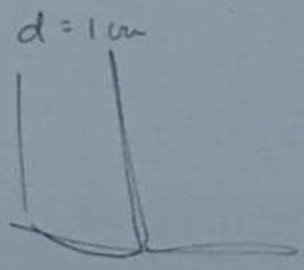
$$l \approx \frac{1}{10} = 0.1$$

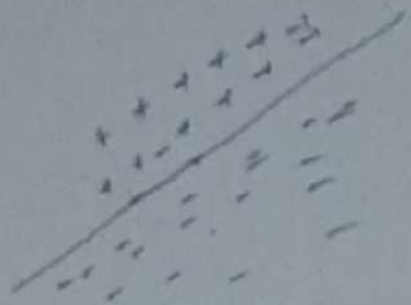
$$n = \frac{K}{l^d} = K \times 10^d$$

$d=10$
 $d=100$
 $d=1000$



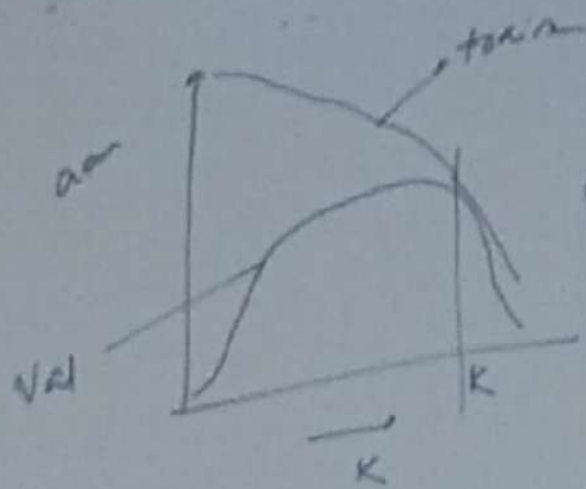
d	l
2	0.1
10	0.63
100	0.955
1000	0.9954





$K=1$

↑ high variance



$K=5$

C.V.

$K=100$

high bias

$l = \text{edge len}$
 $K \text{ near}$