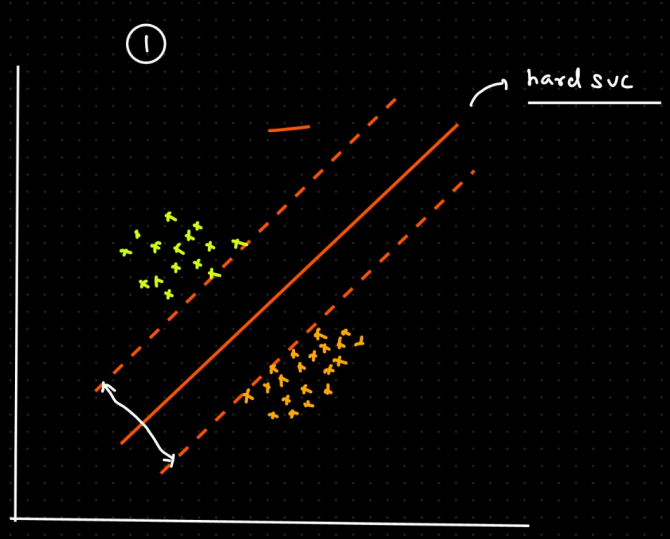
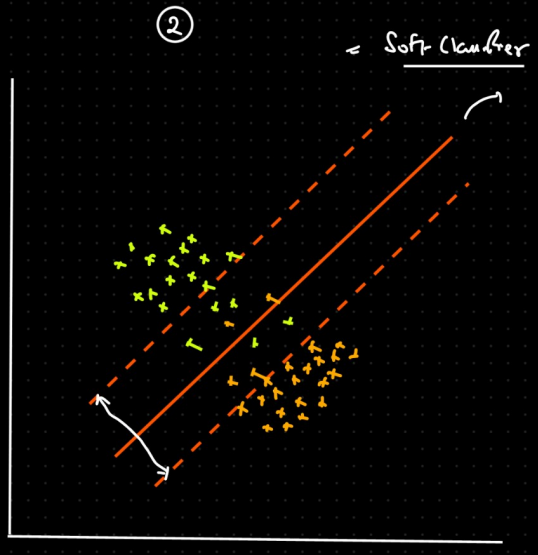
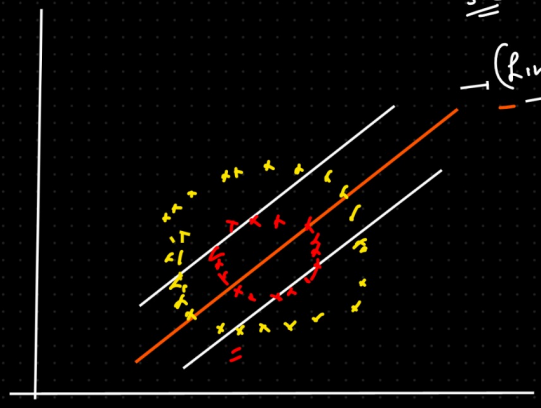


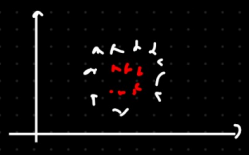




Non-linear → kernal trick

Linear separate data ⇒ {Soft classifier}

{Non-linear sep data} ⇒ kernel trick ⇒ {mathmatical formula} ⇒ {transform.} ⇒ {Lower dim to higher Dim}



① {Polynomial} -
② {Sigmoid}
③ {RBF}

⇒ Scikit → kernel = ''

Transformation

{ kernel trick | funtion }

= transformation

= 1D → 2D

lower higher

① Linear SVC

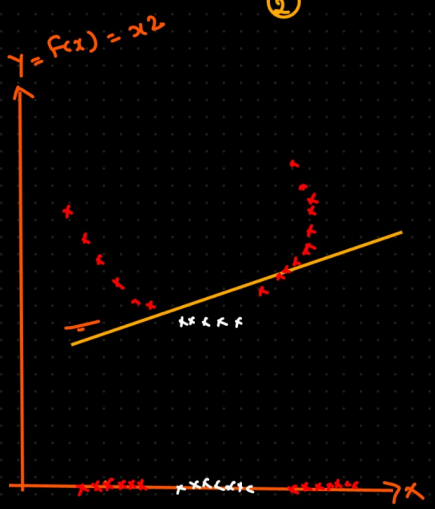
1D

Acc↓↓

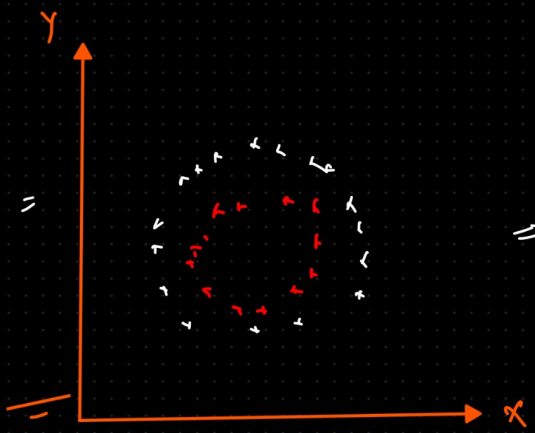
$y = x^2$

$y = f(x) = x^2$

②



Acc↑



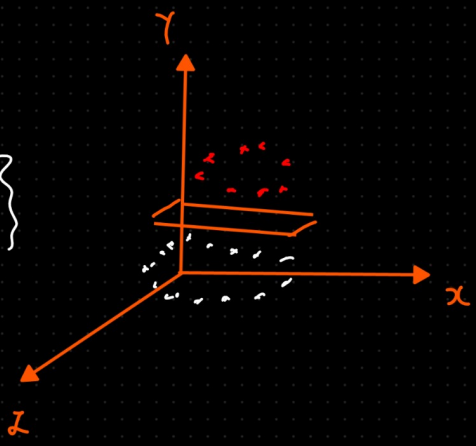
SVC Linear sep

Acc↓↓

⇒ { transformation

low-dim to high-dim }

2D-3D



Acc↑

Kernels.

1. Linear → Soft-classifier
2. Polynomial
3. Sigmoid
4. RBF

Polynomial

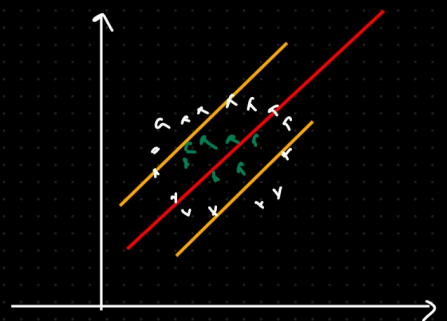
Lower-Dim to higher-Dim

(x_1, x_2)

$f(x_1, x_2) = (x_1^T \cdot x_2 + r)^d$

degree: 3, 2, 1, 4 ...

↳ new feature ⇒ higher



2D-3D

3D-4D

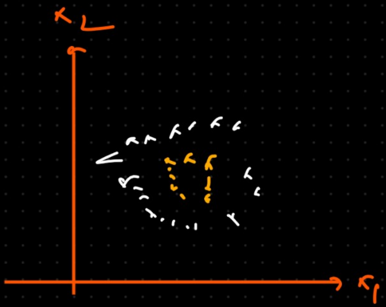
new feature

Dot product = $\left\{ \begin{bmatrix} x_1 \\ x_2 \end{bmatrix} \cdot \begin{bmatrix} x_1 & x_2 \end{bmatrix} \right\}$

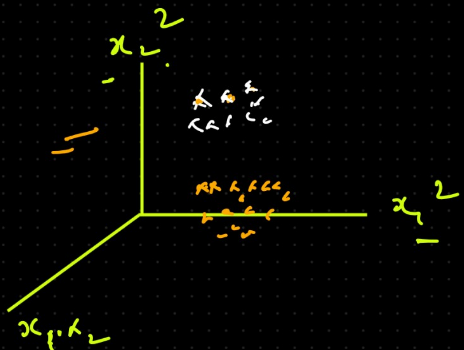
⇓

$$\begin{bmatrix} x_1^2 & x_1 . x_2 \\ x_1 . x_2 & x_2^2 \end{bmatrix}$$

$(x_1 \quad x_2) \Rightarrow x_1^2 \quad x_1 . x_2 \quad x_2^2$



⇒



Data → math ⇒ trans ⇒ hyperplane

SVM

Degree → 3 ⇒ 70f ⇒ 2 ⇒ 100

$$f(x_1, x_2) = (x_1^T x_2 + 1)^2$$

↳ expensive

= (new feature)

2

quadratic

$(a+b)^2$

$= a^2 + b^2 + 2ab$

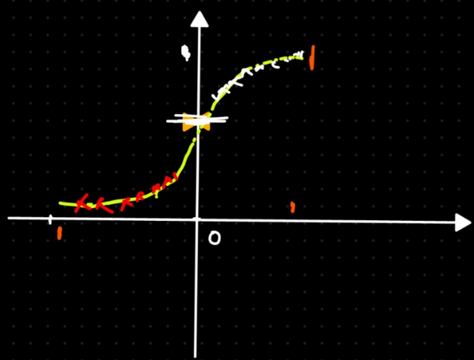
$= (a+b)^3$

② Sigmoid

$$\frac{1}{1+e^{-x}}$$

transform ⇒ $\left\{ \frac{1}{1+e^{-x}} \right\}$

↑ ↑ ↑ ↑ ↑



③ RBF ⇒ Radial basis function

e^{-x^2}

HLD ⇒ high level Documentation

LLD ⇒ low level Documentation

Industry ⇒ Documentation

new ⇒ Documentation

Portfolio :-

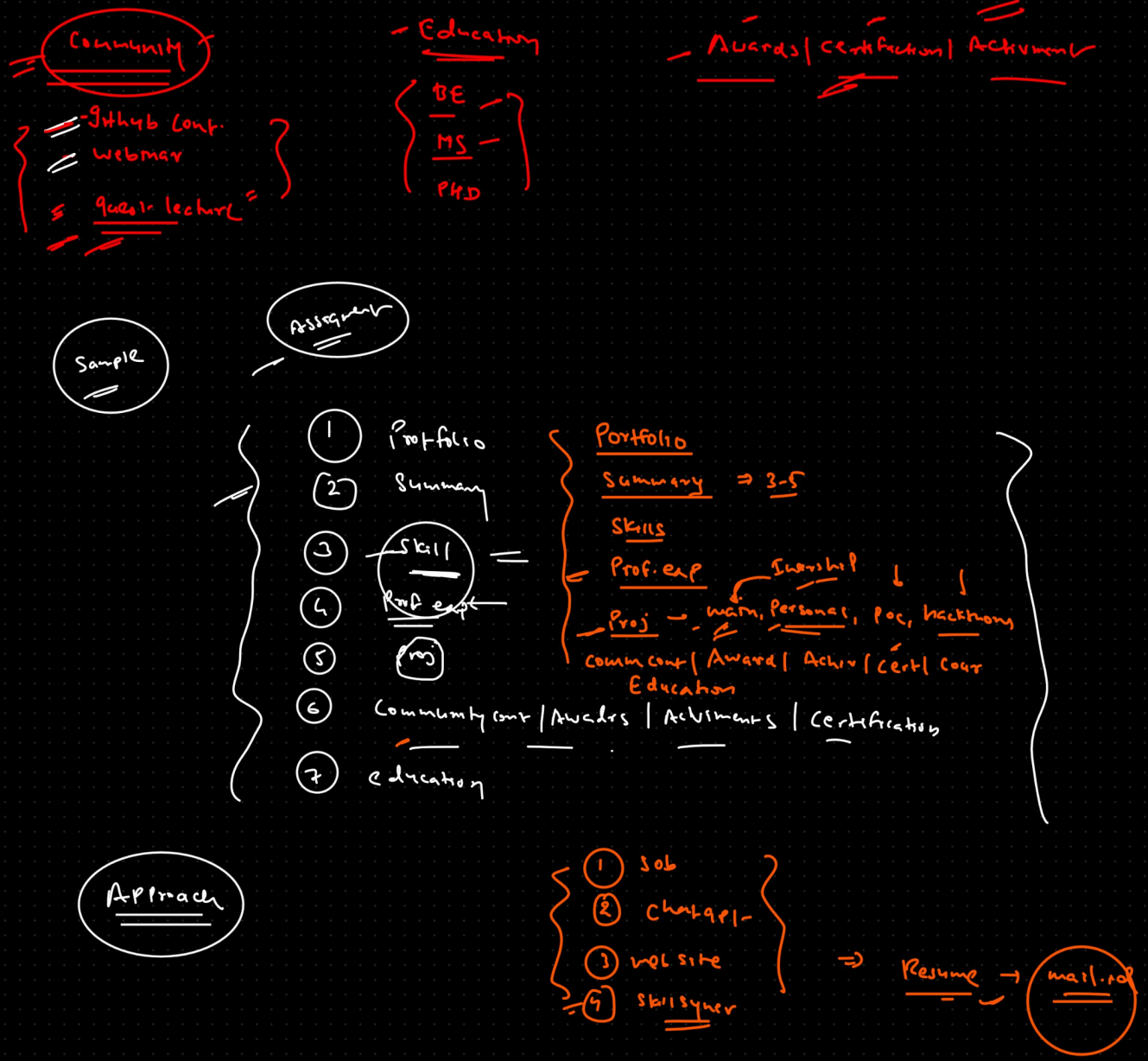
1. Name
2. Designation
3. email | phone no. | Loc | DOB
4. Linkedin
5. github
6. Youtube ⇒ optional
7. Website based Profolio ⇒ optional
8. Blog

- Profile (Professional
  - Description
  - { Past exp. | Present | future }
  - 5-6
- { Skill set }
- { Professional exp. }
  - (xyz) ⇒ Designation ⇒ [1 2020 - 1 2023]
  - { responsibility }
- internship
- (fresher)

Project ⇒ 3 | 4 (3-5)

Fresher

- Main
  - 3
  - Project name
  - Company
  - Date
  - tech
  - Prob.
  - Description
  - Conclusion
- PoC (Proof of concept)
  - = 1
- Personal Project
  - X
  - 1
- (hackathon.)
  - X
  - 1
  - X
- 2


Community
-Github Cont.
Webmar
Guest lecture
Education
BE
MS
PHD
Awards | certifications | Activities
Sample
Assignment
1 Portfolio
2 Summary
3 Skill
4 Prof exp
5 Proj
6 Community cont | Awards | Activities | Certifications
7 education
Portfolio
Summary ⇒ 3-5
Skills
Prof. exp
Internship
Proj
main, Personal, Poc, Hackthons
Comm cont | Award | Activ | Certi | Cour
Education
Approach
1 Job
2 Chatgpt
3 wbl site
4 Skillsyncr
⇒
Resume
mail.id
2
1-2