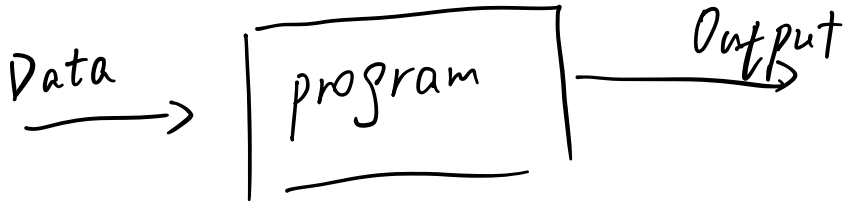
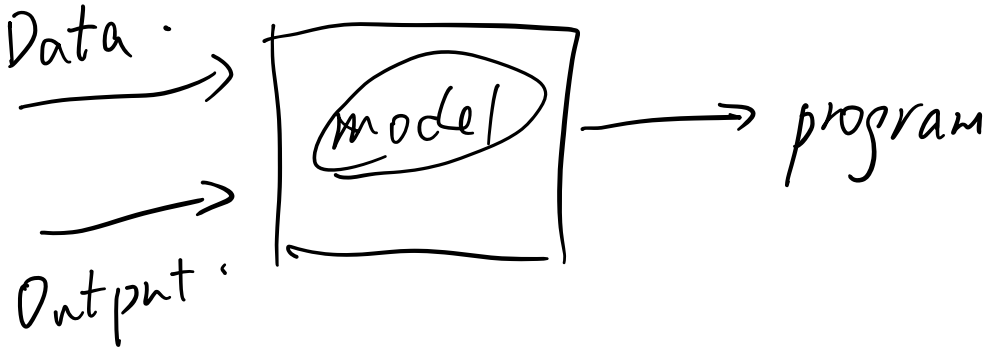
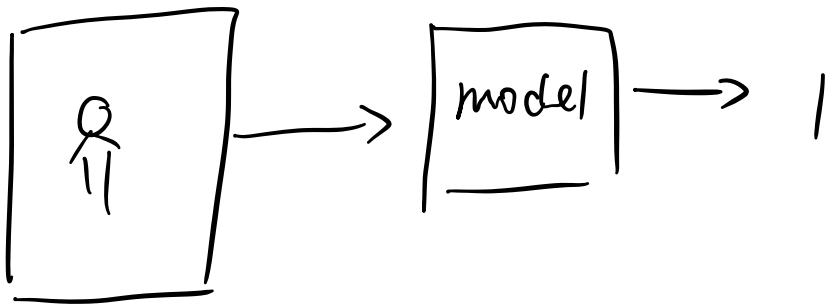
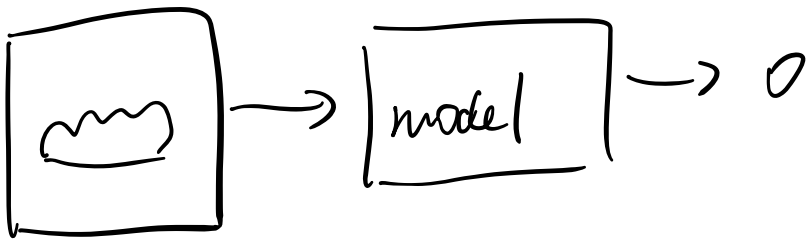
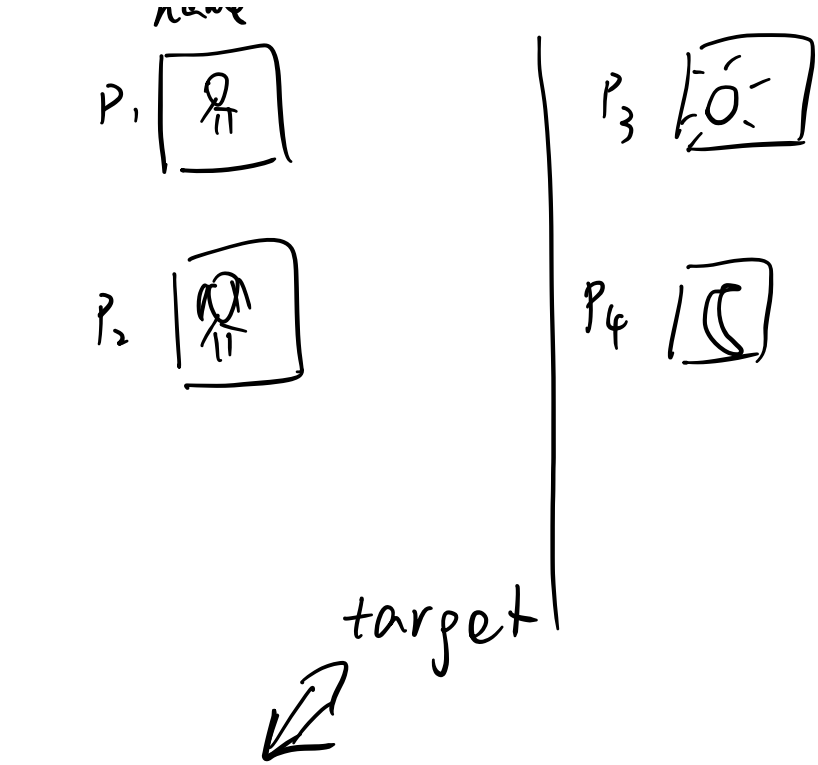

Data
program
Output


Data
model
program
Output


model
1

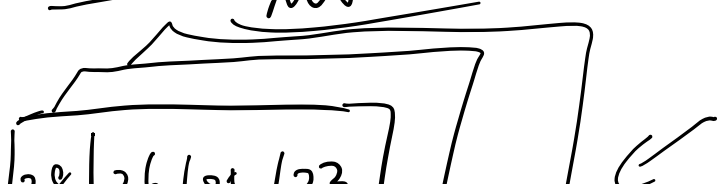

model
0

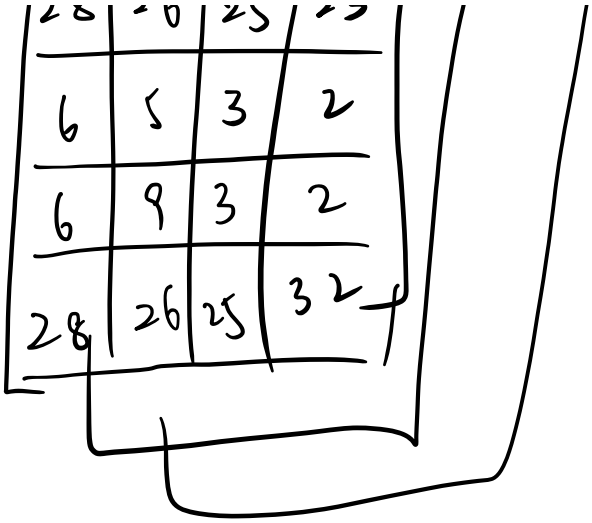


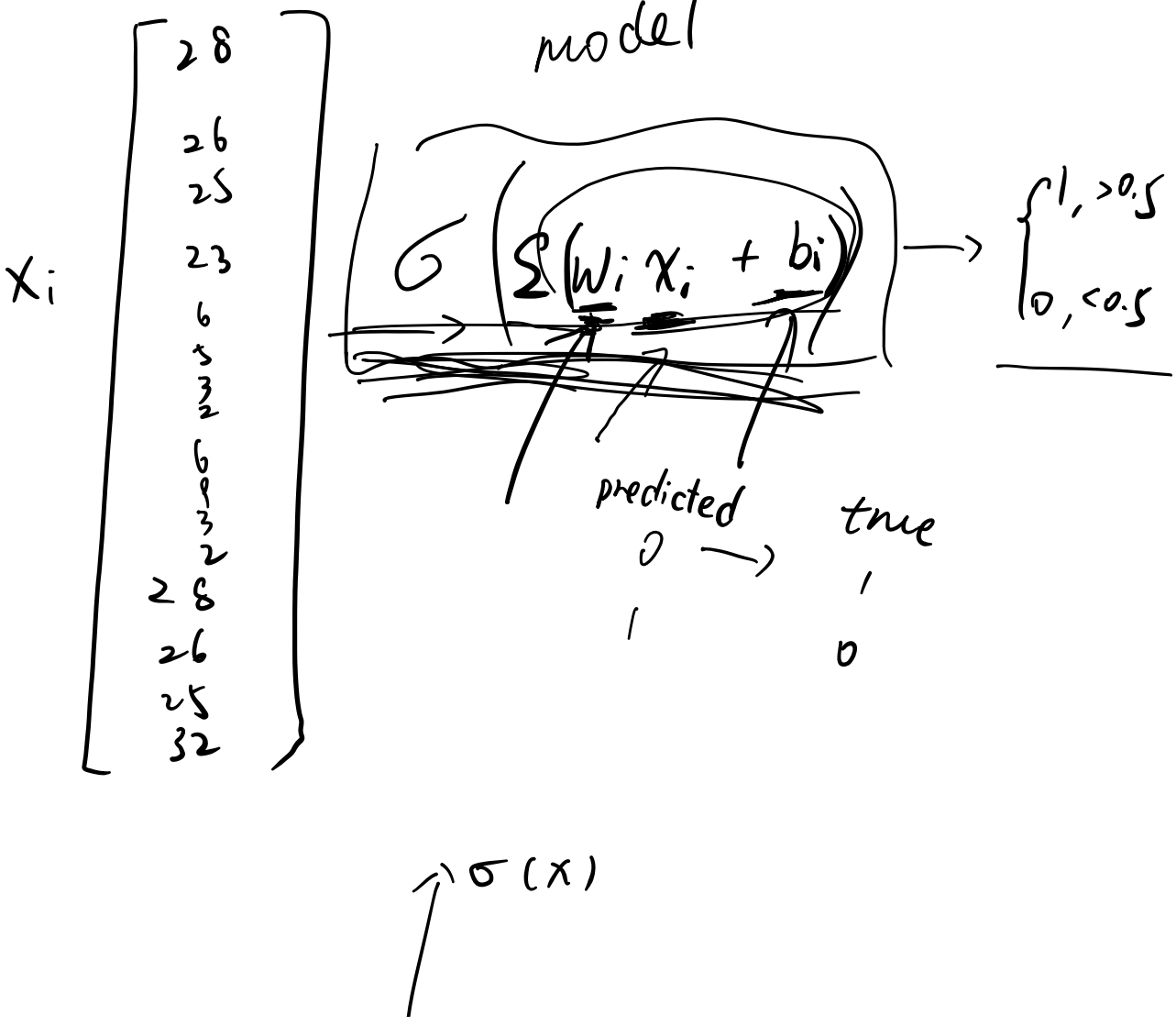
target

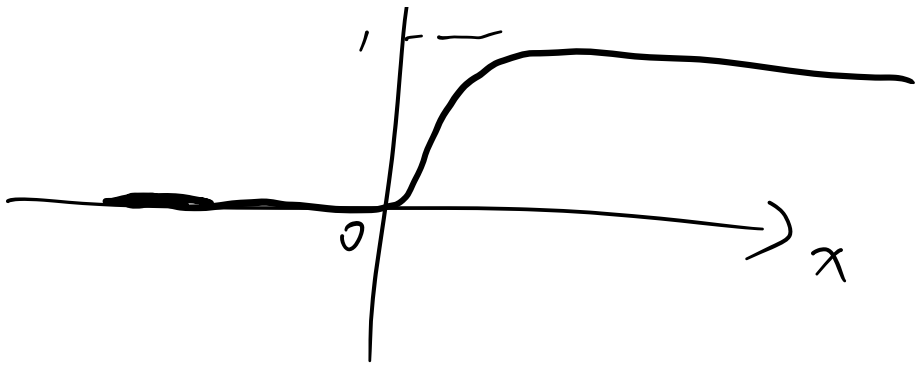
name	label
P1	1
P2	1
P3	0
P4	0
P5	1
P6	1

model.




6 5 3 2
6 9 3 2
28 26 25 32


model
X_i
28
26
25
23
6
5
3
2
6
9
3
2
28
26
25
32
$\sigma(\sum(w_i x_i + b_i))$
1, >0.5
0, <0.5
predicted
true
0
1
1
0
$\sigma(x)$



model: hypothesis

假设.

$\sigma(\Sigma(w_i x_i + b_i))$

Feature:

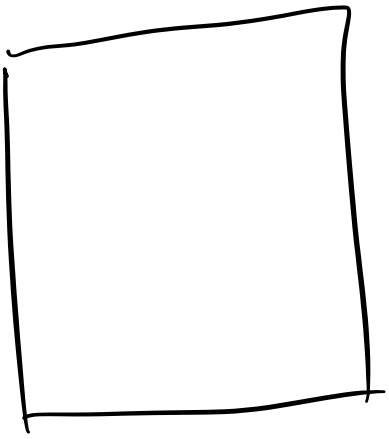
Feature vectors.

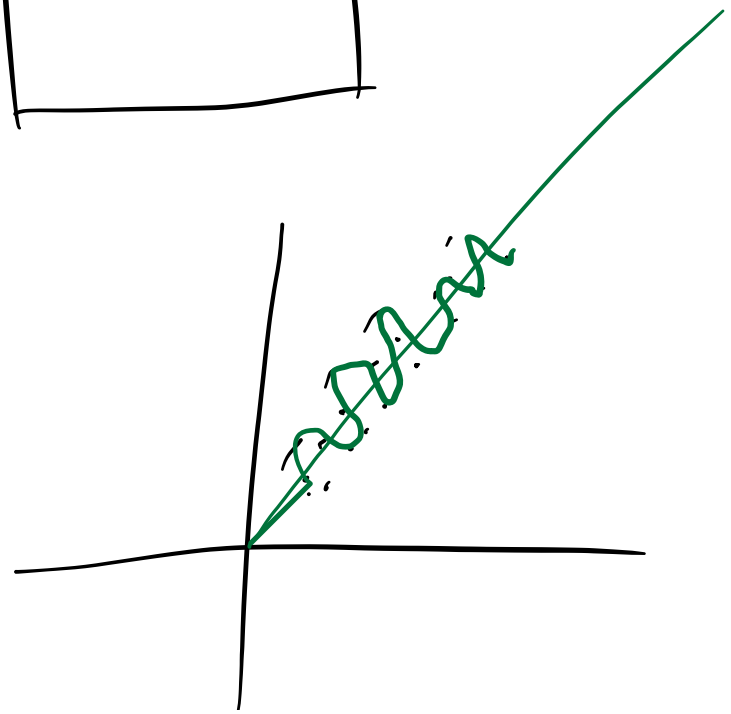
个

Training:

overfitting

underfitting.





machine learning

face recognition

body recognition.

Python

Python object recognition

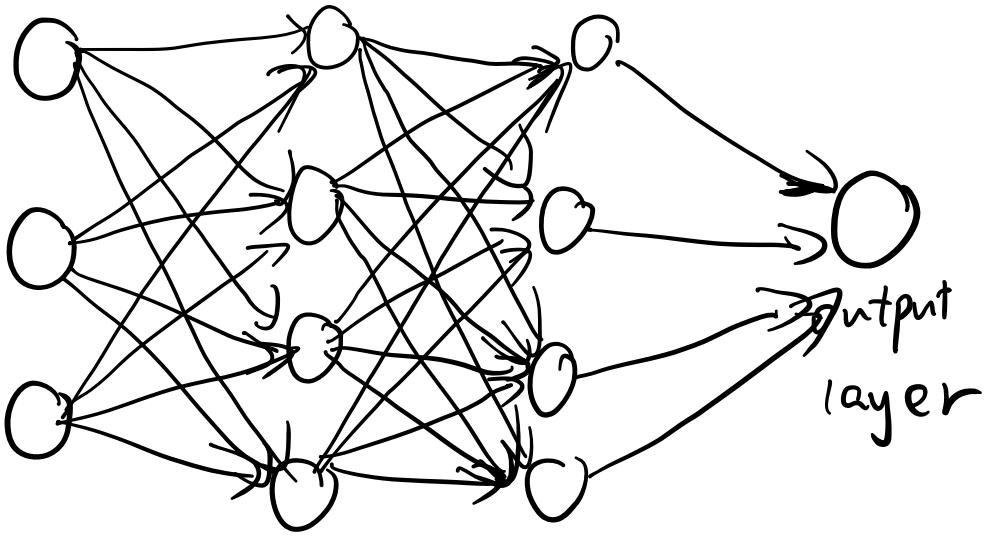
deep model

python vgg16

Keras library

human → draw a bounding box.

$\sigma_1(\sum w_i x_i + b_i)$ σ_2.



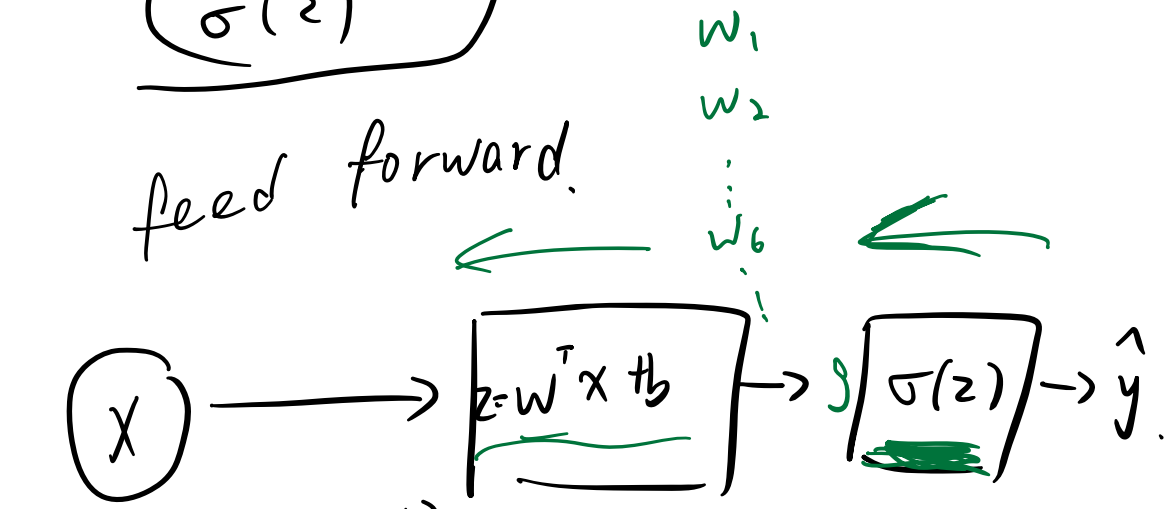
Forward

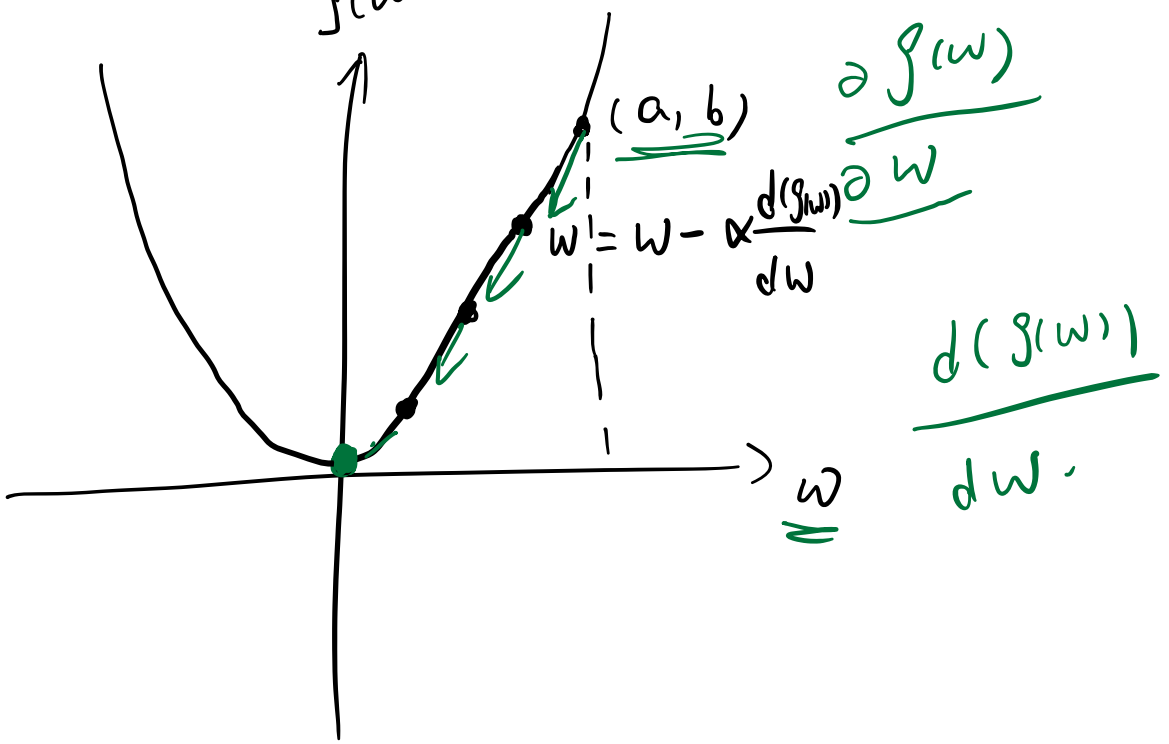
feed forward.

$z = w^T x + b$

$\sigma(z)$

feed forward.





$$\frac{\partial \ell}{\partial z} \cdot \frac{\partial z}{\partial w_1} \qquad \frac{\partial \ell}{\partial w_1}$$

$$\frac{\partial \ell}{\partial z} \cdot \frac{\partial z}{\partial w_2} \cdot \qquad \frac{\partial \ell}{\partial w_2}$$

$$\vdots \qquad \vdots$$

$$\frac{\partial \ell}{\partial z} \cdot \frac{\partial z}{\partial w_6} \qquad \frac{\partial \ell}{\partial w_6}$$

$$\vdots \qquad \vdots$$