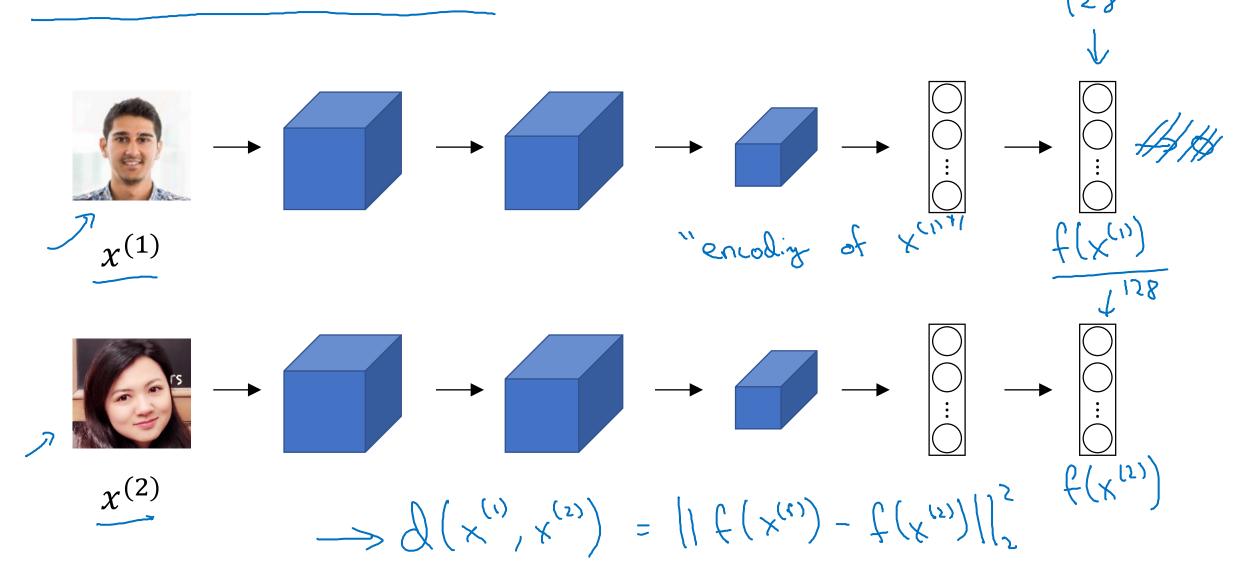


## Face recognition

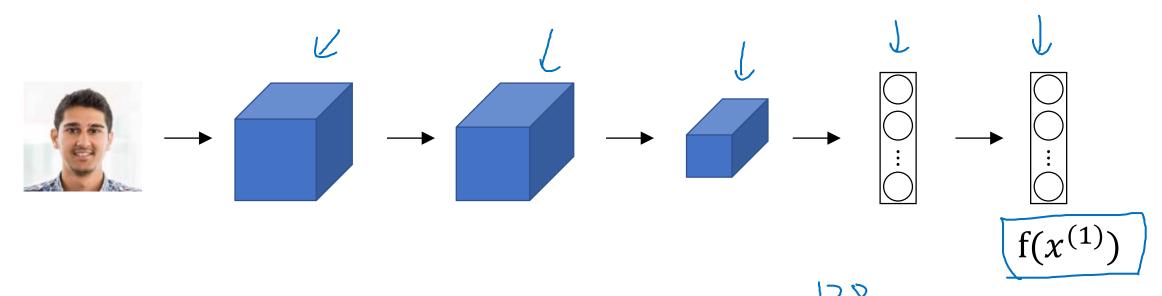
## Siamese network

## Siamese network





## Goal of learning



Parameters of NN define an encoding  $f(x^{(i)})$ 

Learn parameters so that:

If 
$$x^{(i)}$$
,  $x^{(j)}$  are the same person,  $\|f(x^{(i)}) - f(x^{(j)})\|^2$  is small.

If  $x^{(i)}$ ,  $x^{(j)}$  are different persons,  $\|f(x^{(i)}) - f(x^{(j)})\|^2$  is large.