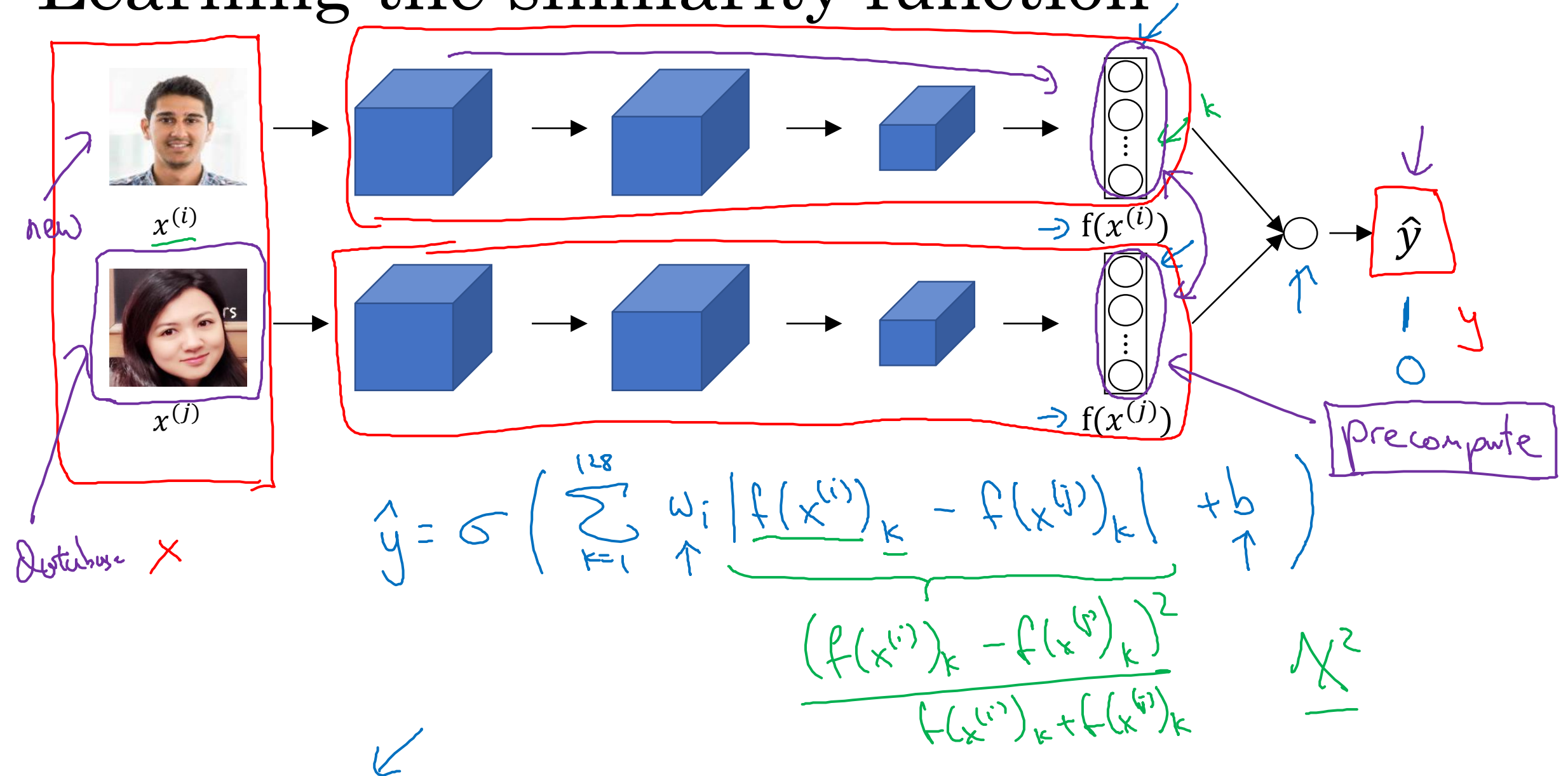deeplearning.ai

Face recognition
***
Face verification and binary classification

Learning the similarity function

new

$x^{(i)}$

$x^{(j)}$

Database ✗

$\rightarrow$ f($x^{(i)}$)

$\rightarrow$ f($x^{(j)}$)

k

Precompute

$\hat{y}$

1

0

$$\hat{y} = \sigma\left(\sum_{k=1}^{128} w_i \left| f(x^{(i)})_k - f(x^{(j)})_k \right| + b \right)$$

$$\frac{\left(f(x^{(i)})_k - f(x^{(j)})_k\right)^2}{f(x^{(i)})_k + f(x^{(j)})_k}$$

χ^2

[Taigman et. al., 2014. DeepFace closing the gap to human level performance]   Andrew Ng

Face verification supervised learning

x		y
		1
		0
		0
		1

"Same"

"different"

[Taigman et. al., 2014. DeepFace closing the gap to human level performance]

Andrew Ng