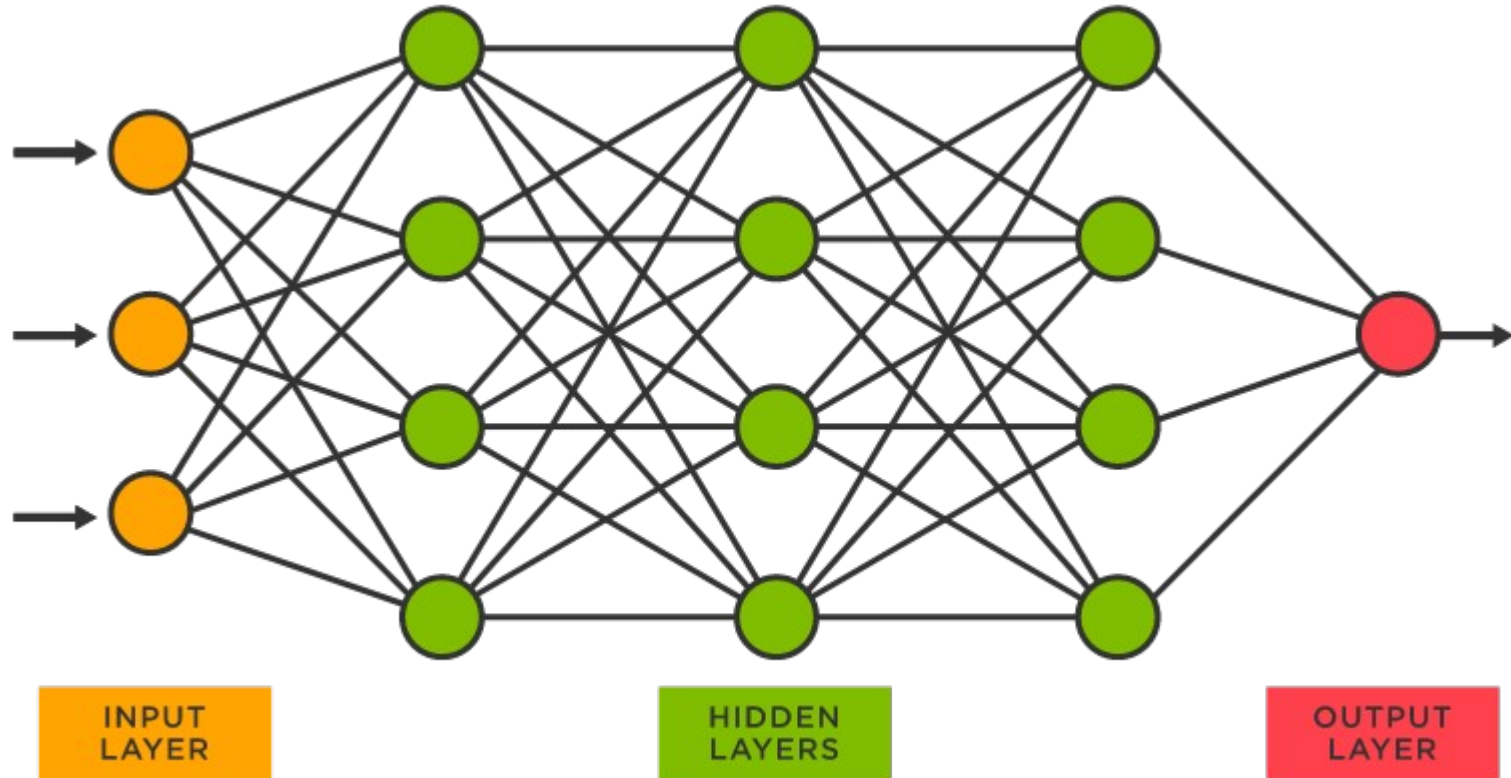


Redes neuronales

Redes neuronales



Redes neuronales



Redes neuronales



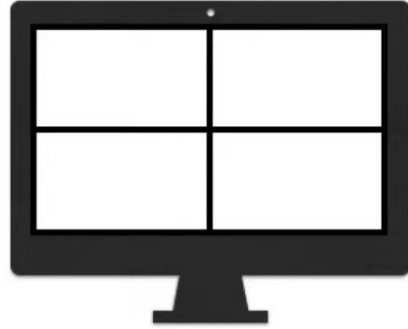
Redes neuronales

Slanted land

Slanted Land



Slanted people

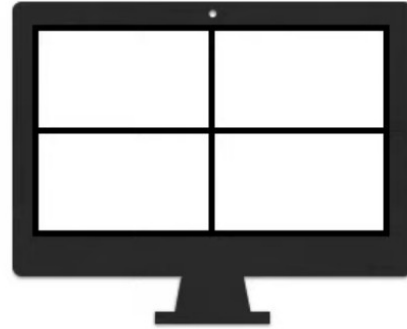


2x2 screens

Slanted Land

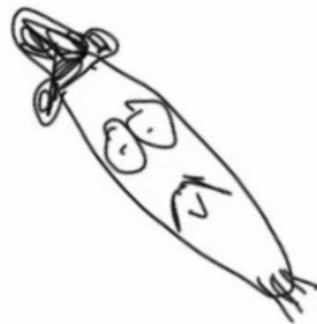
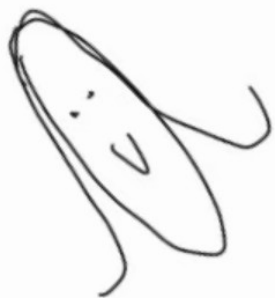
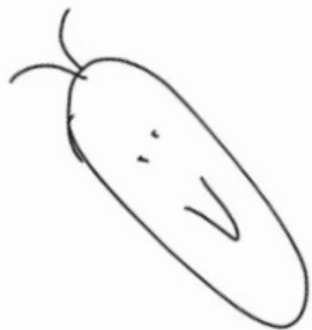


Slanted people



2x2 screens

Faces

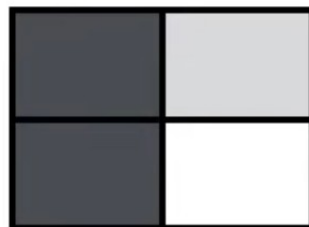


Tell them apart

Faces



Noise





0

1

Faces

0.75	0
0	0.75

1	0.25
0.25	0.75

1	0
0	1

0.75	0
0.25	0.75

Noise

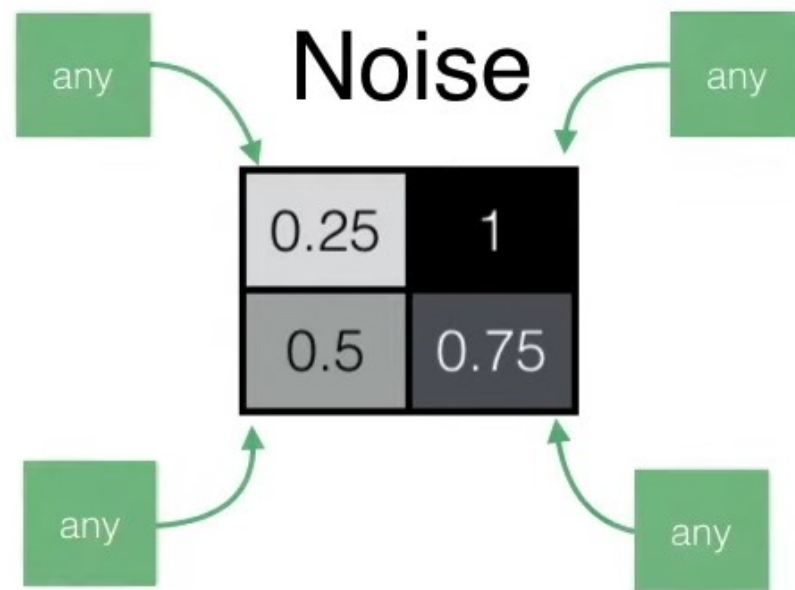
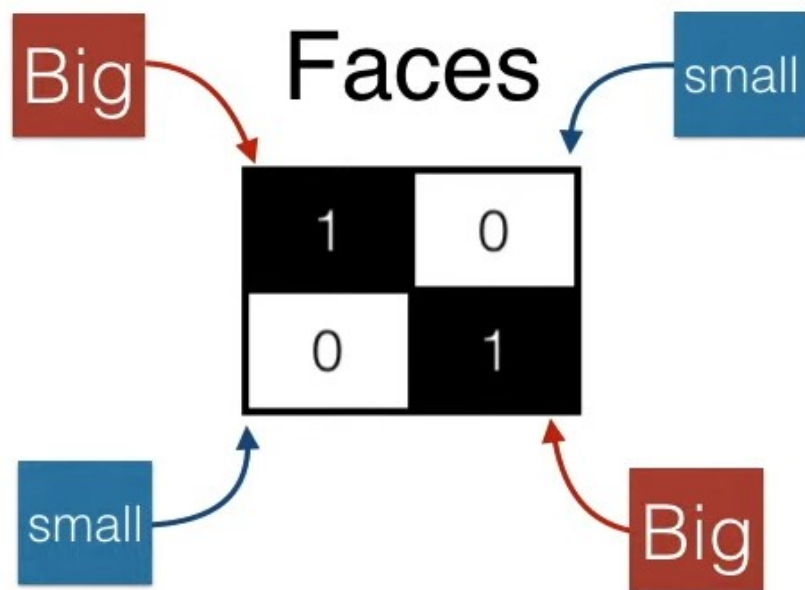
0.25	0
1	0.75

0.25	1
0.5	0.75

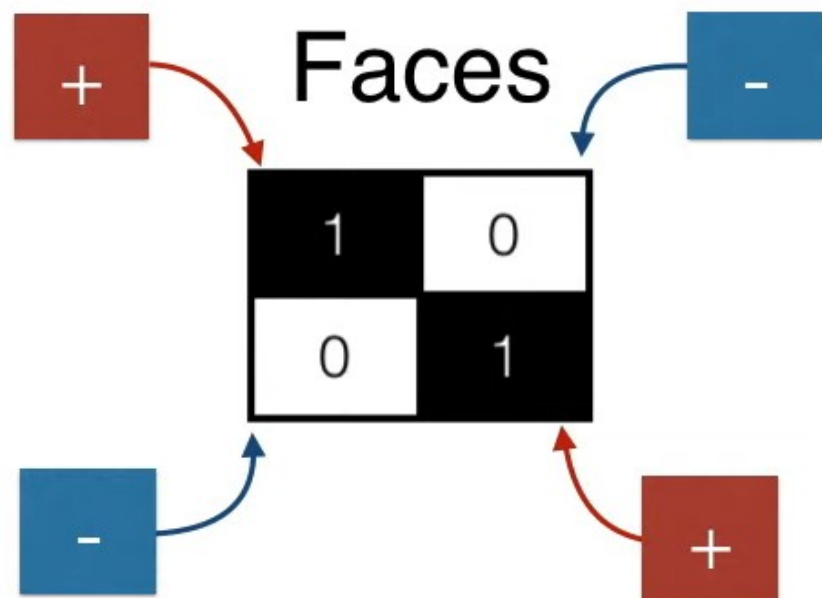
0.75	0.5
0.75	0

1	1
0	0.75

Building the discriminator

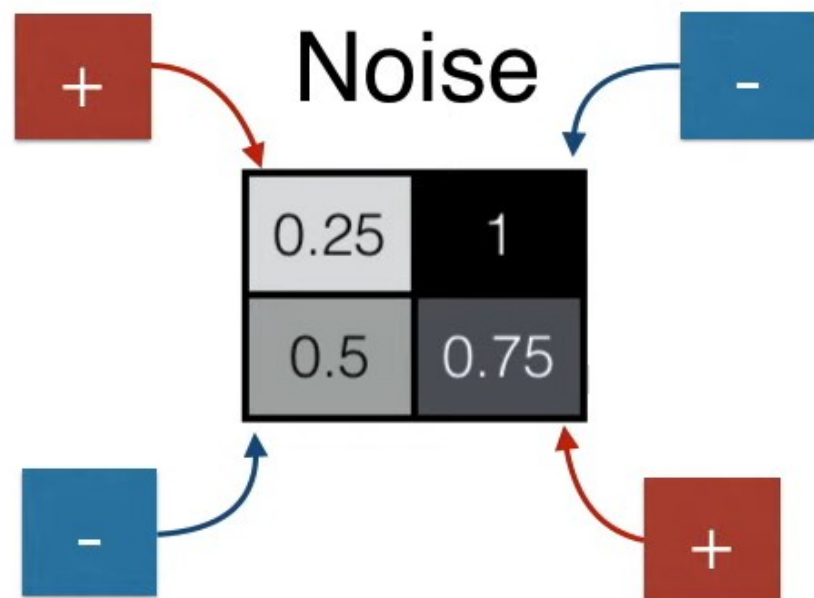


Building the discriminator



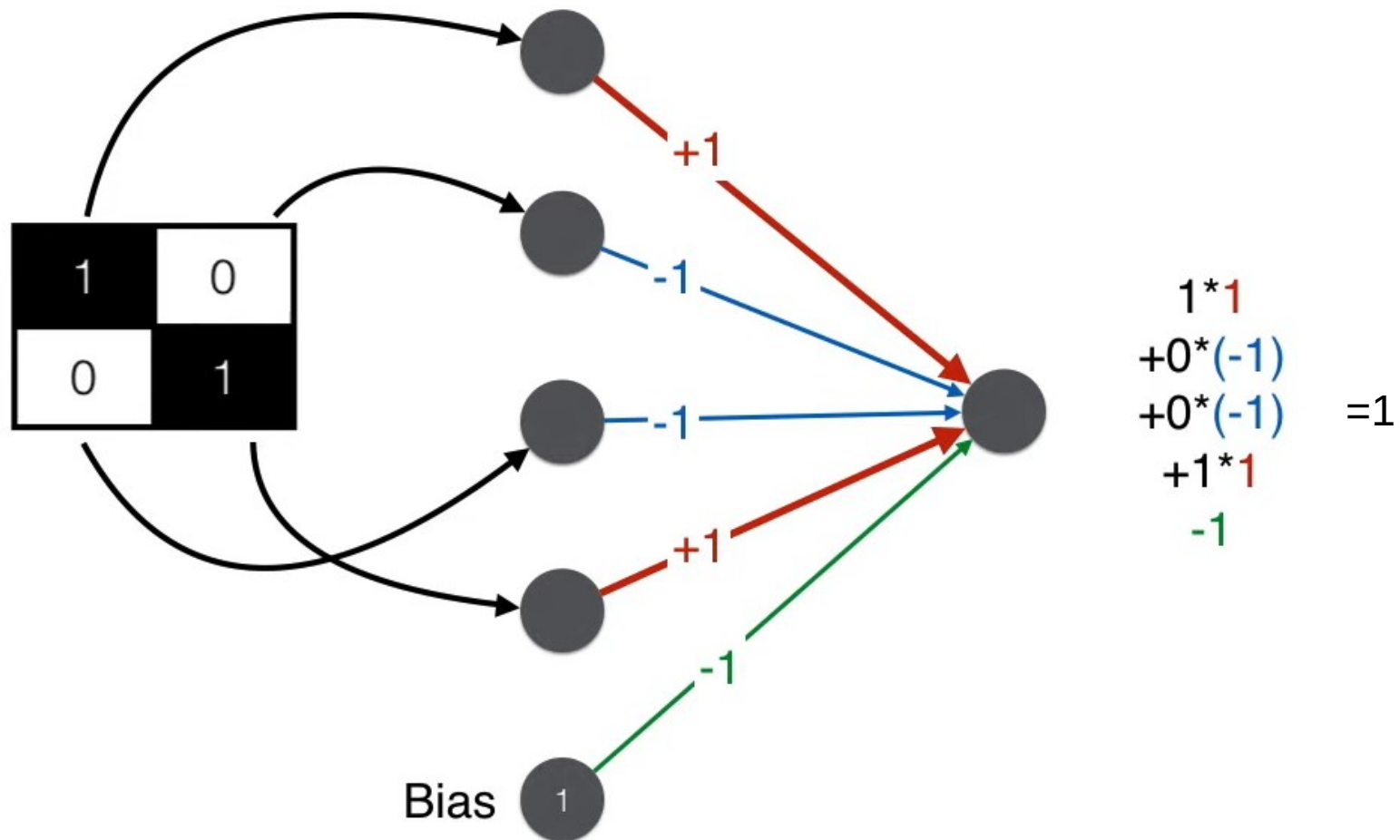
$$1*1 + 0*(-1) + 0*(-1) + 1*1 = 2$$

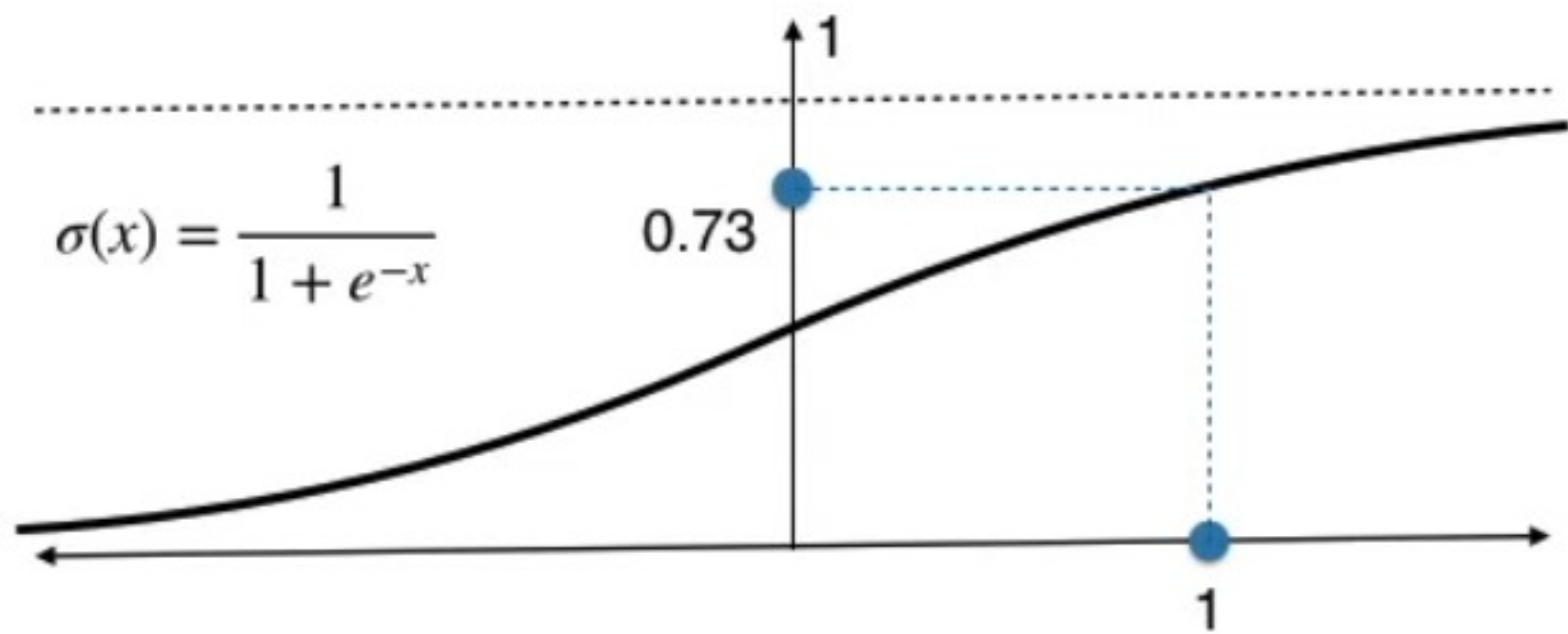
Threshold = 1



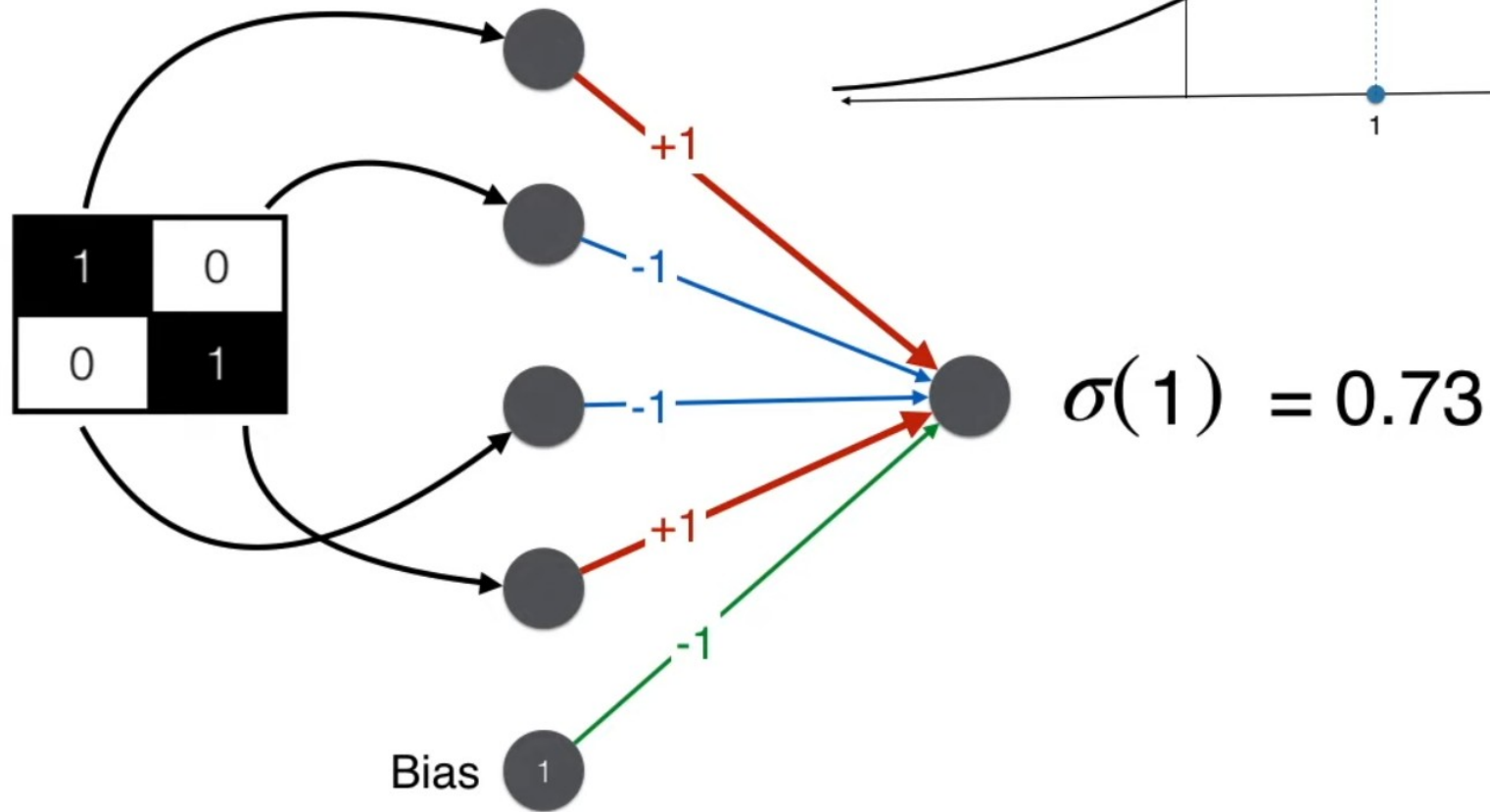
$$0.25*1 + 1*(-1) + 0.5*(-1) + 0.75*1 = -0.5$$

Discriminator

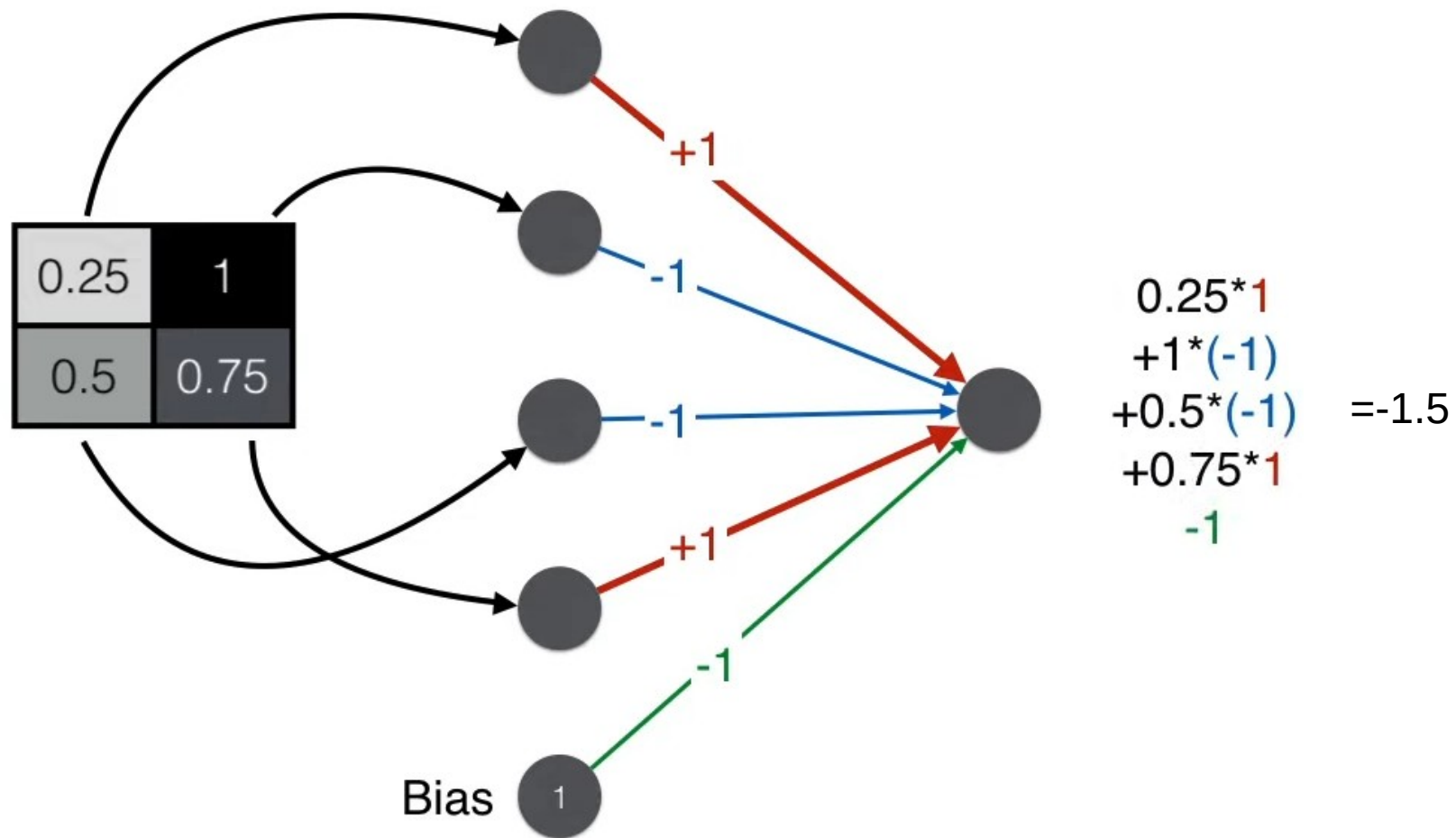




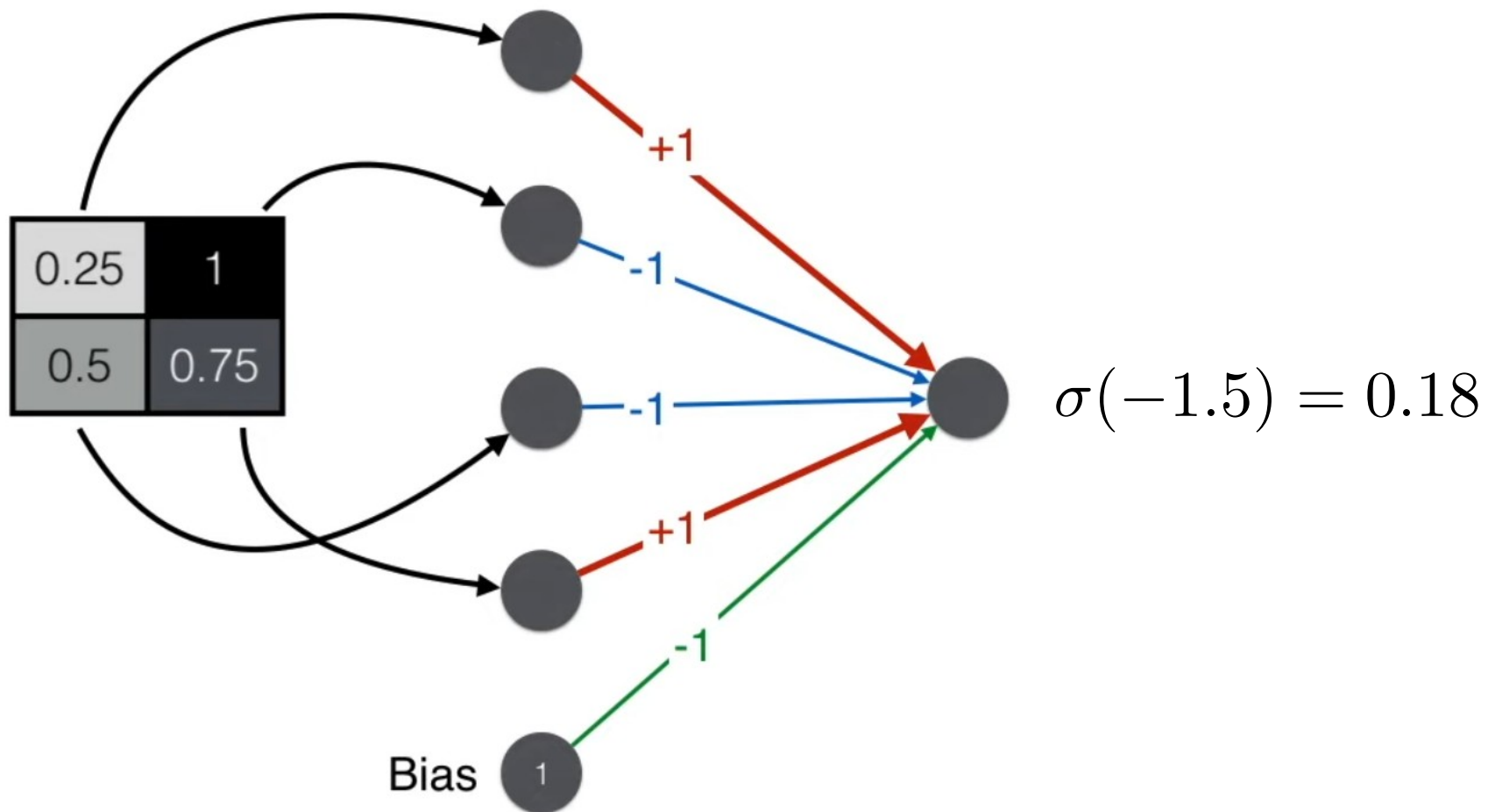
Discriminator



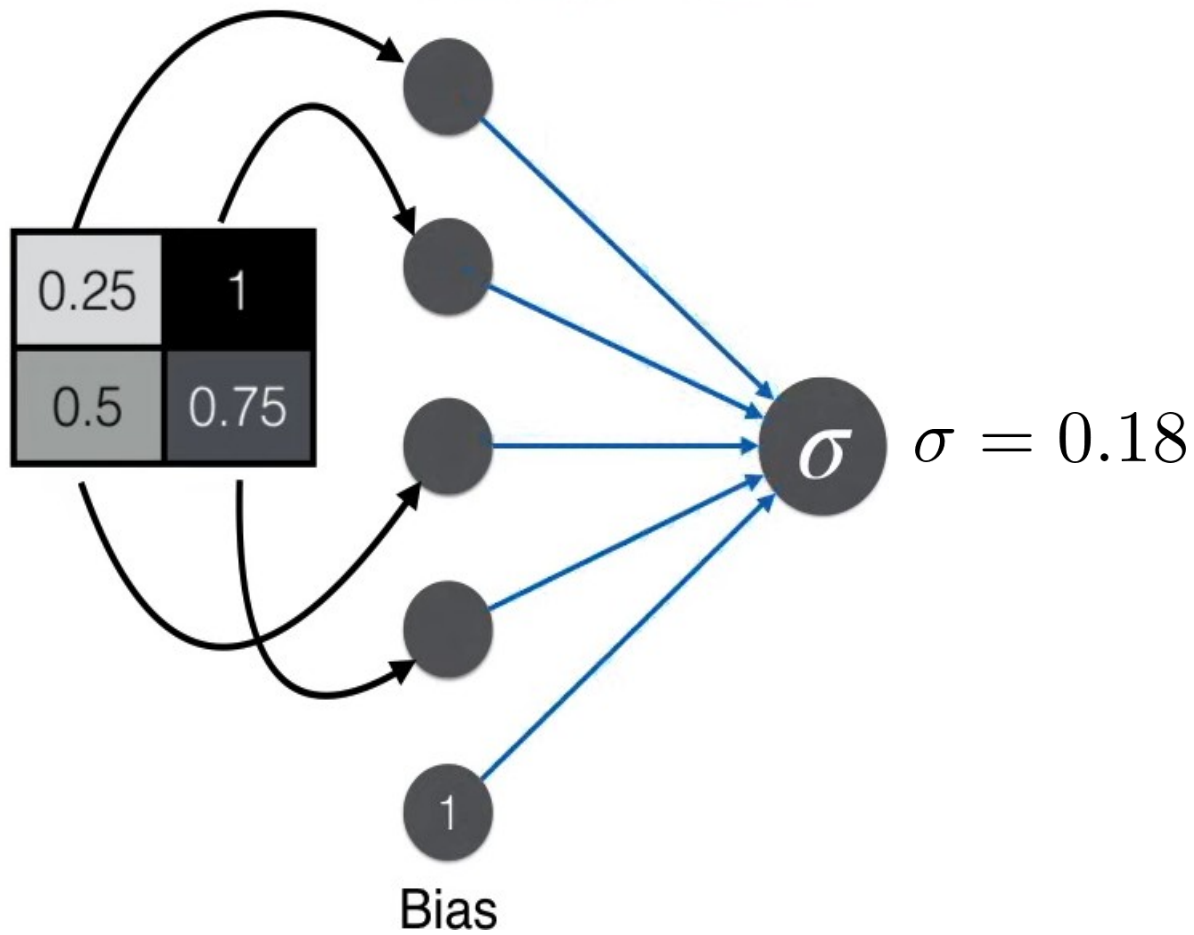
Discriminator



Discriminator

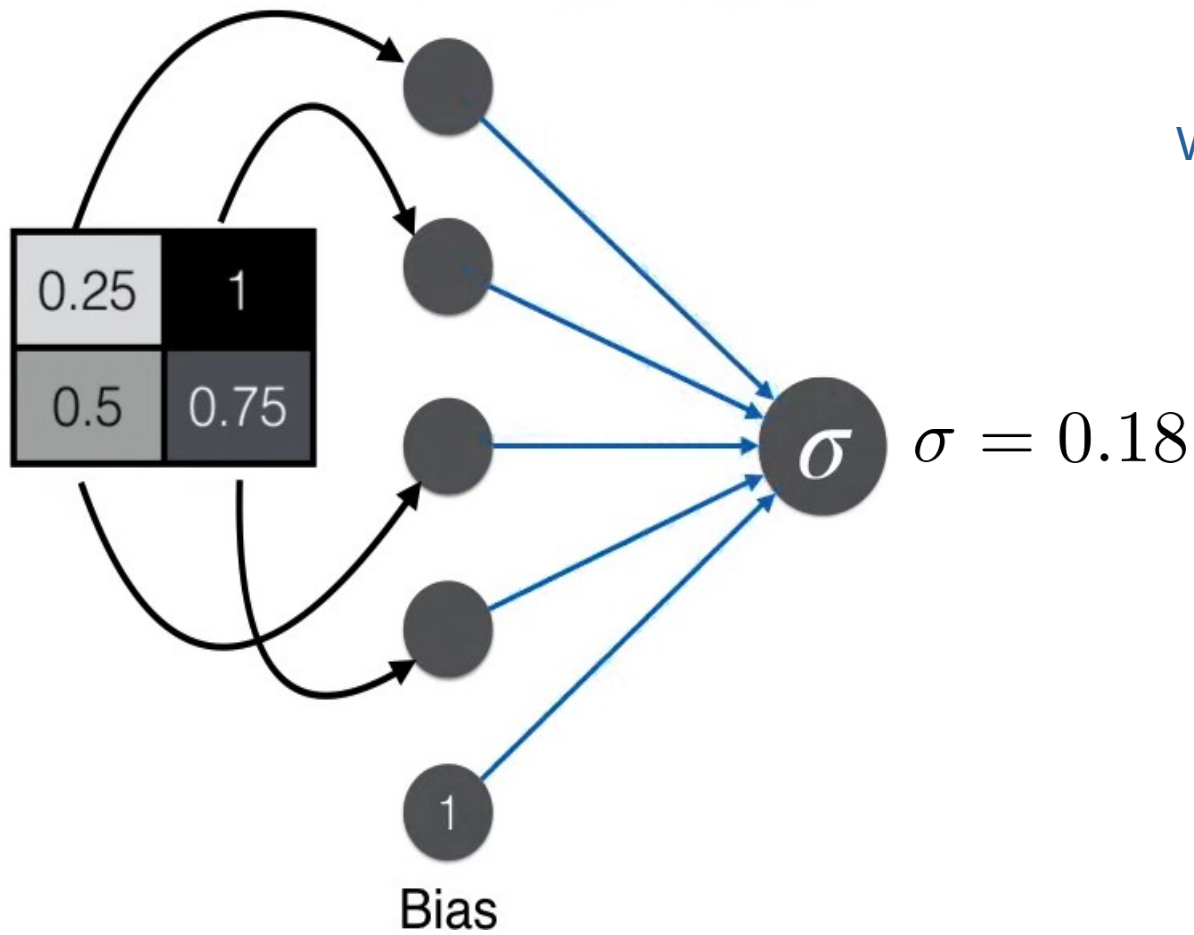


Discriminator

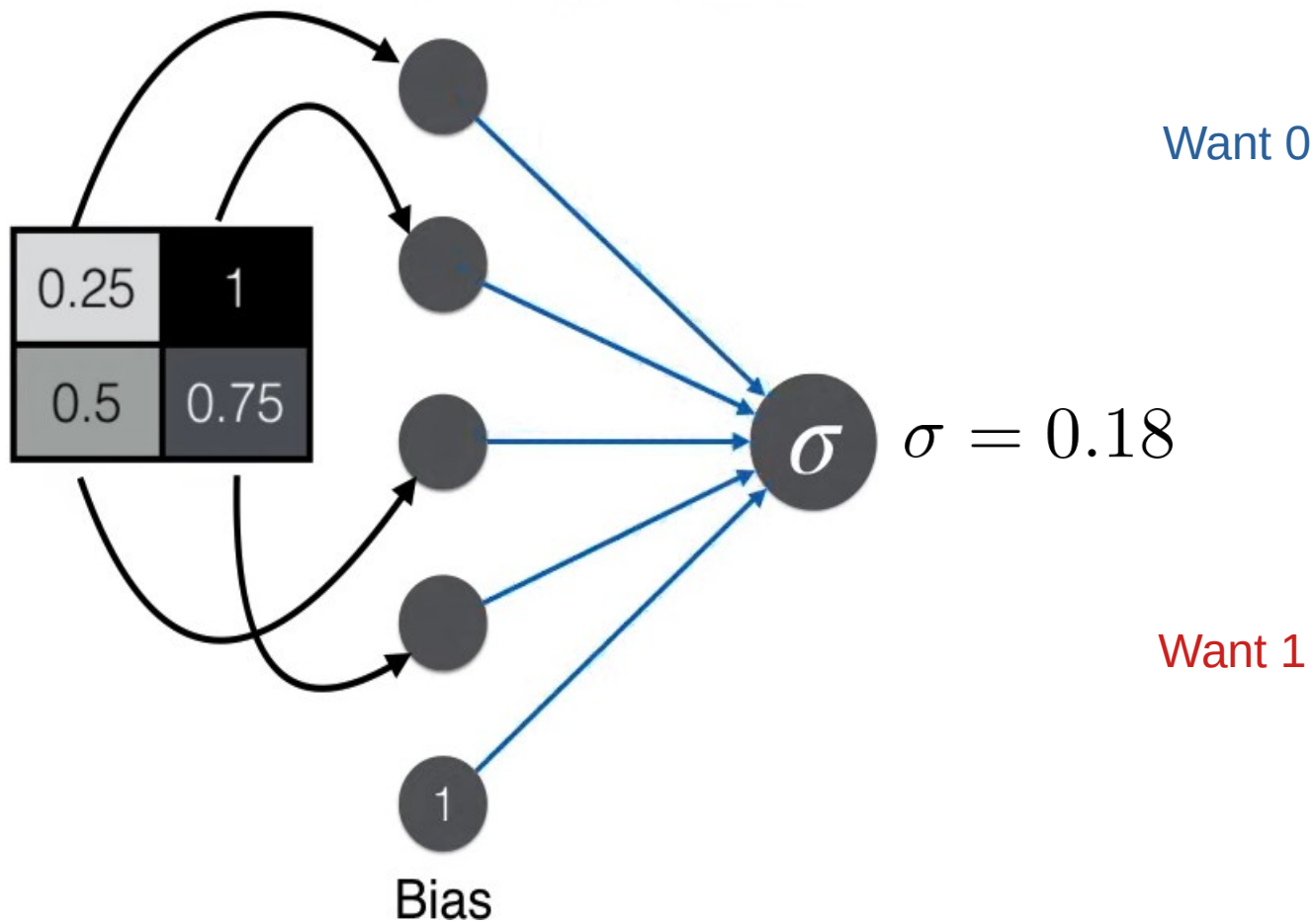


Discriminator

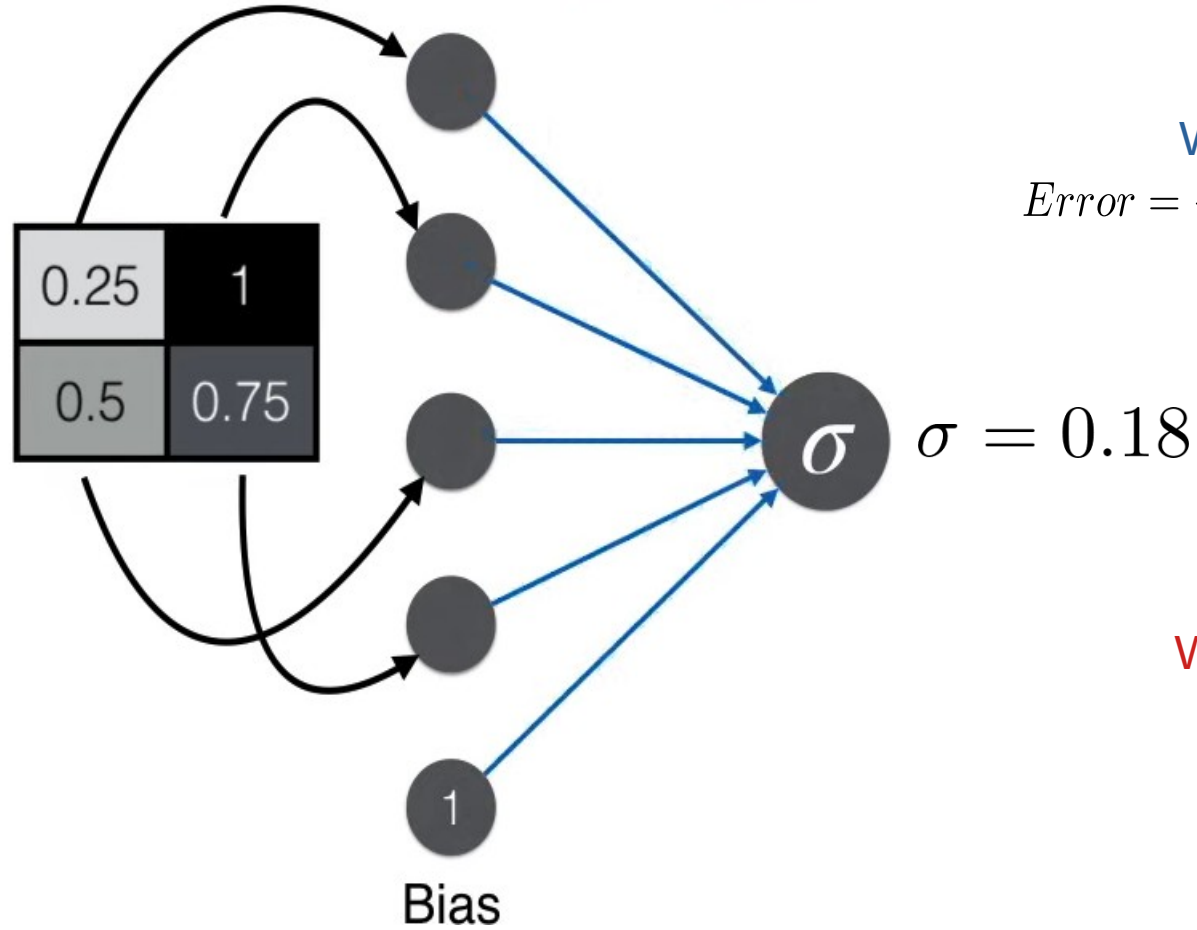
Want 0



Discriminator



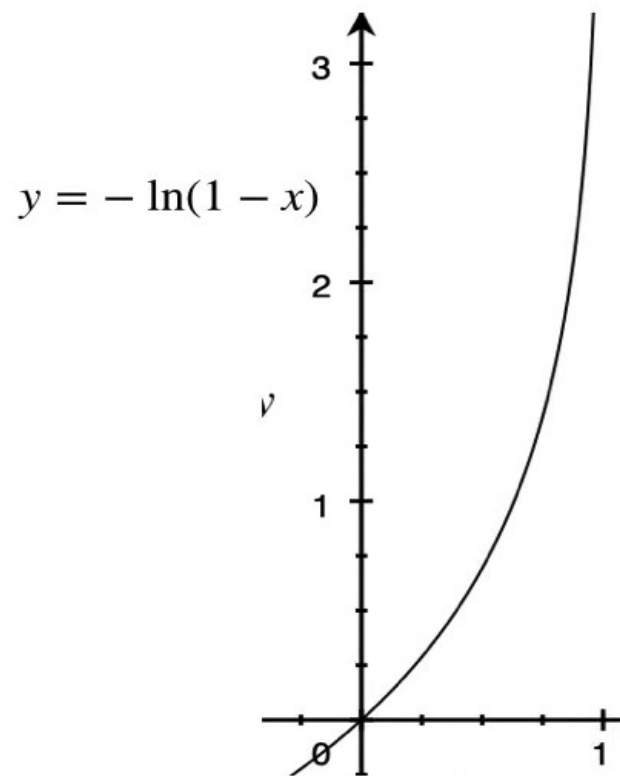
Discriminator



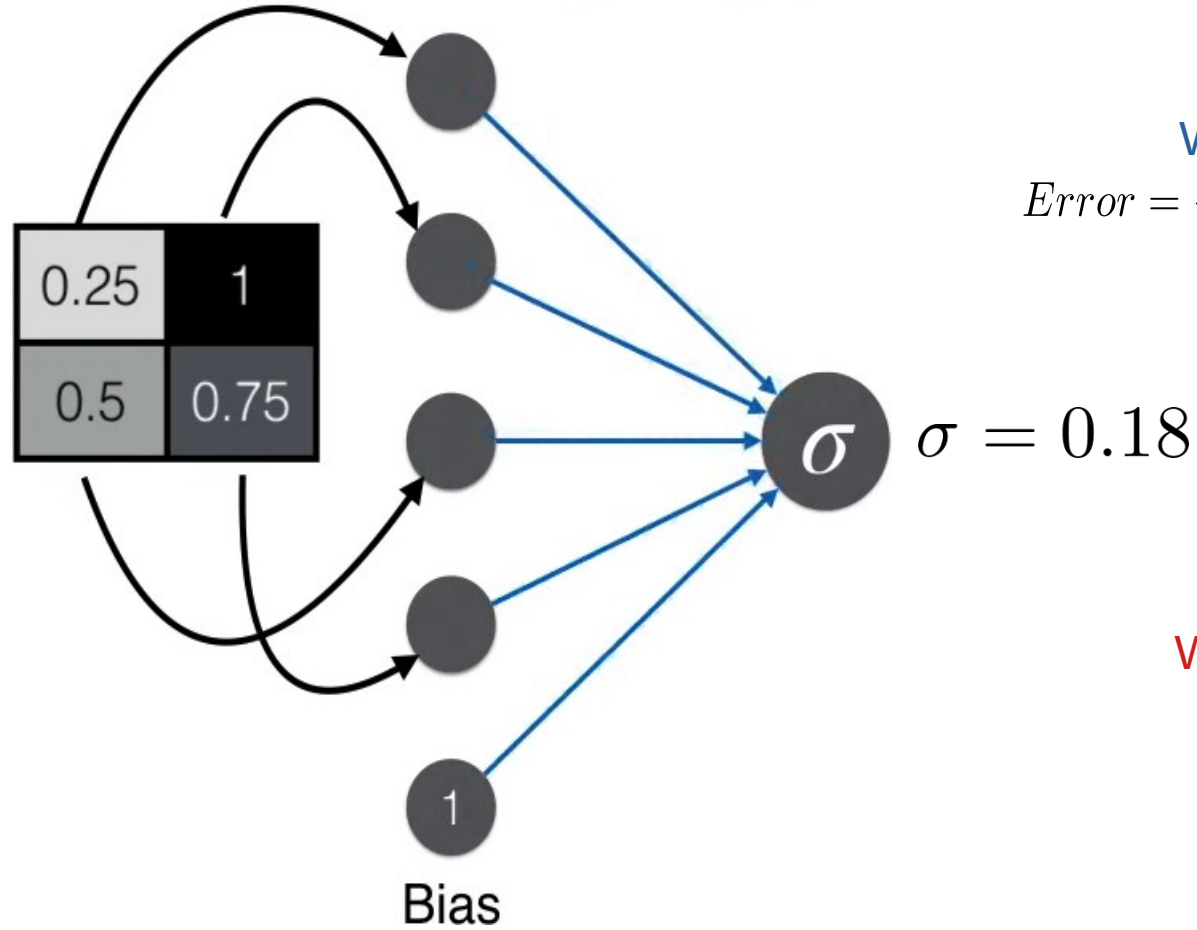
Want 0

$$\text{Error} = -\ln(1 - \text{prediction})$$

Want 1



Discriminator

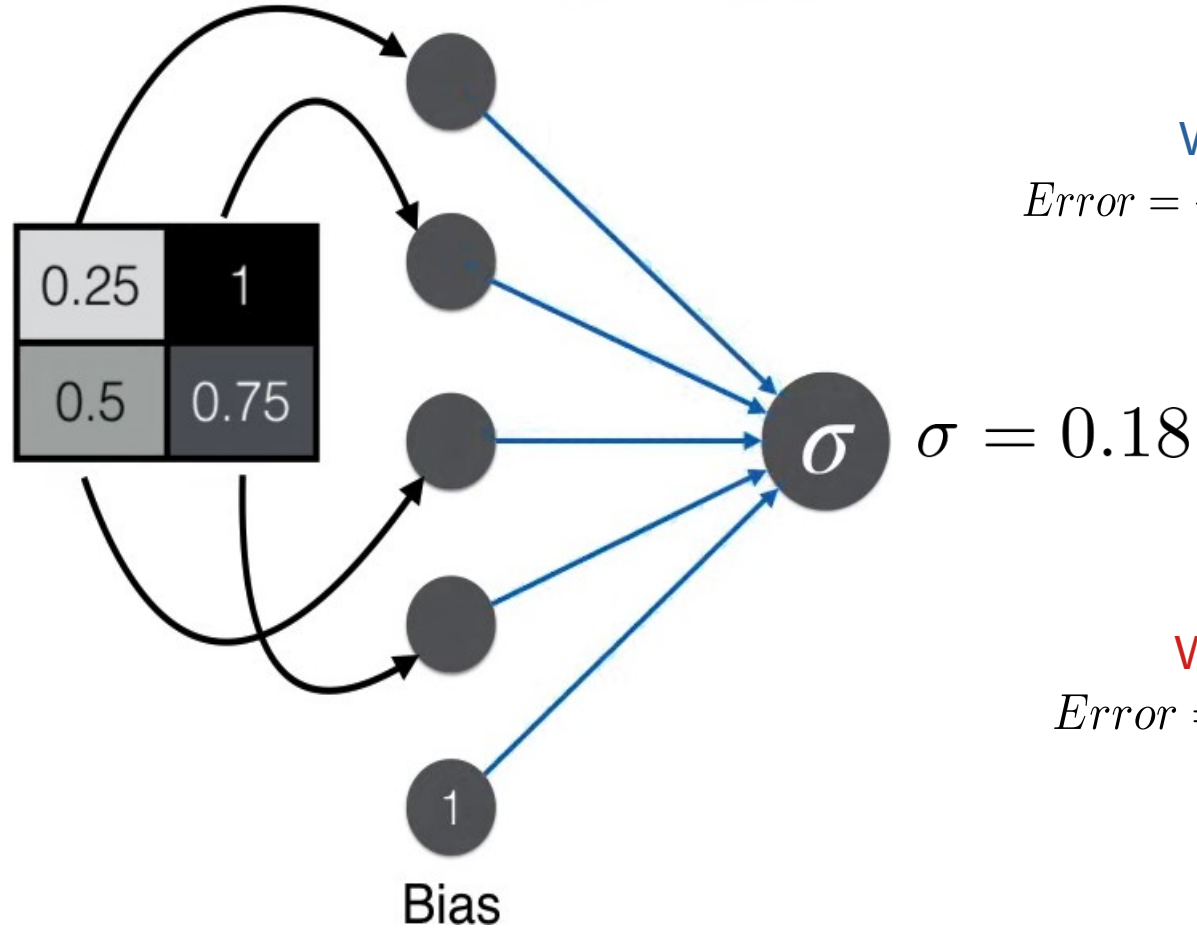


Want 0

$$\text{Error} = -\ln(1 - \text{prediction})$$

Want 1

Discriminator

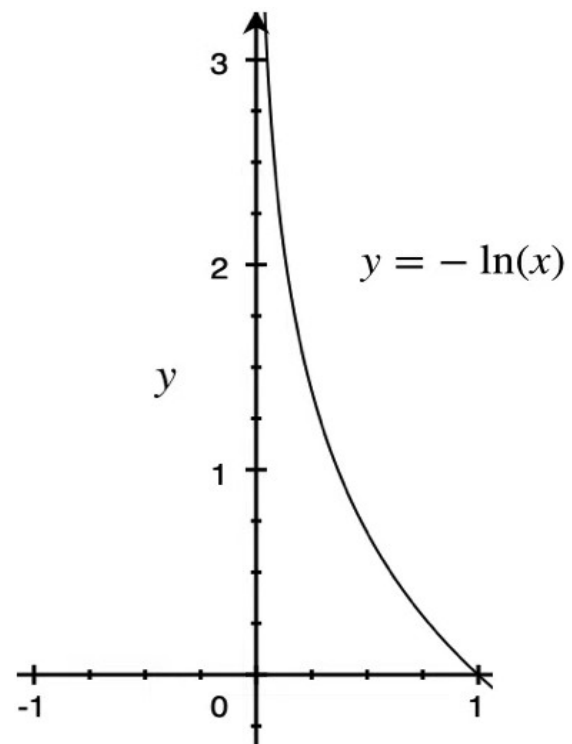


Want 0

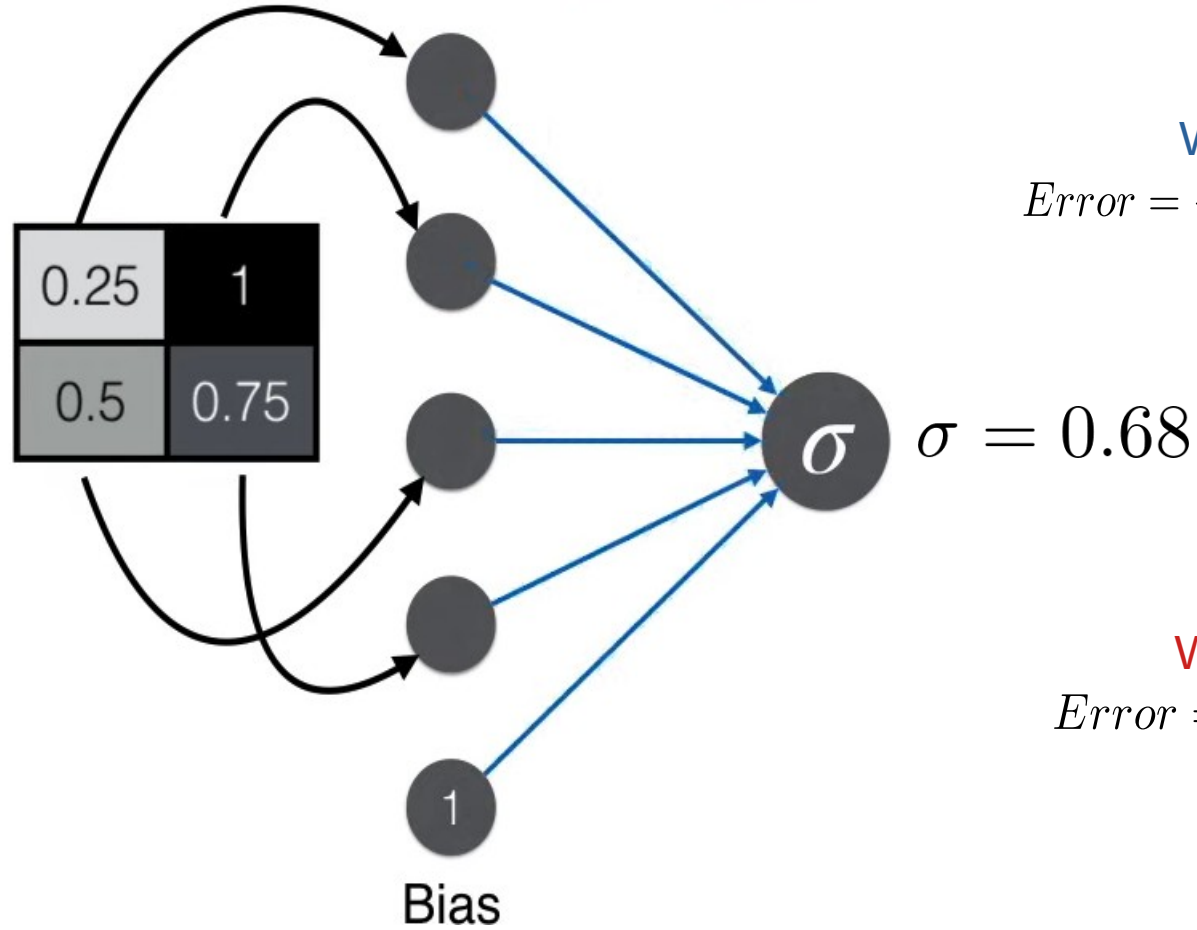
$$Error = -\ln(1 - prediction)$$

Want 1

$$Error = -\ln(prediction)$$



Discriminator




Want 0

$$Error = -\ln(1 - prediction)$$

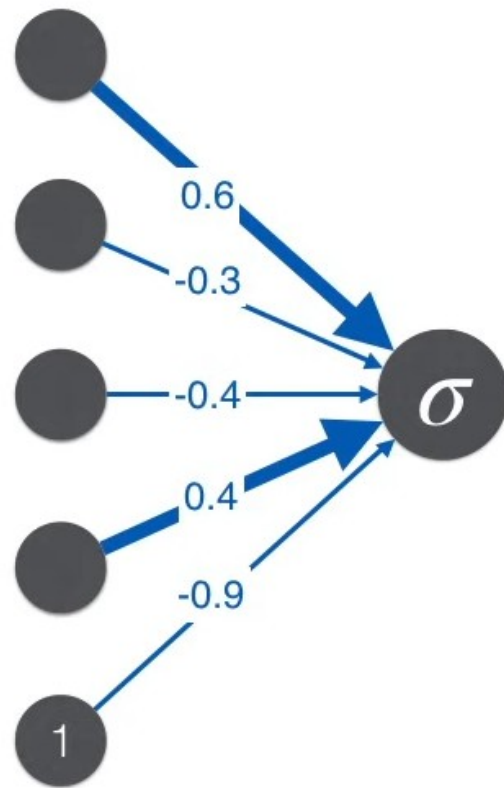
Want 1

$$Error = -\ln(prediction)$$

The background is a complex, abstract pattern. It features a grid-like structure with various geometric and organic shapes. There are large, dark, stylized floral or star-like motifs in the corners. The central area is filled with intricate, swirling patterns in shades of brown, tan, and black. The overall color palette is muted, consisting of earthy tones like olive green, brown, and black, with some lighter tan areas. The text is superimposed on this pattern.

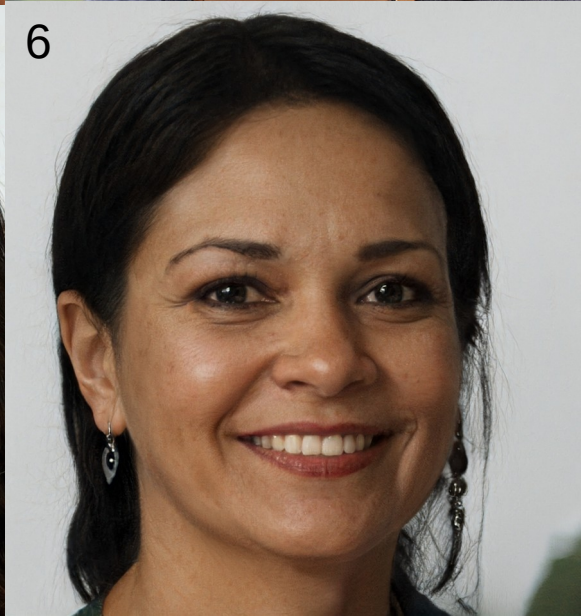
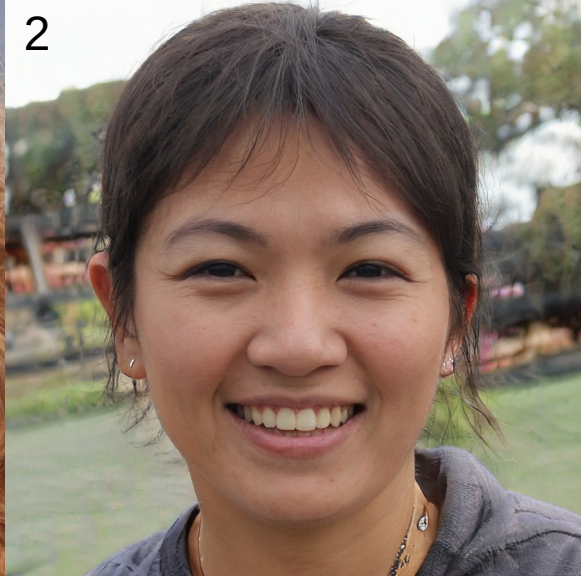
**2000 YEARS
LATER**

Discriminator



Bias

unrealperson.com









Interferencia catastrófica

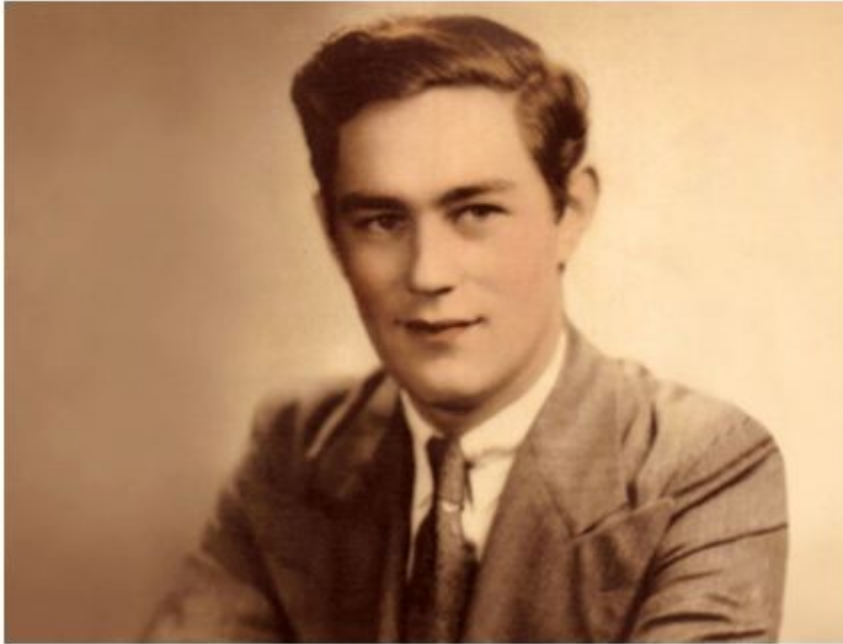


Video

Memoria

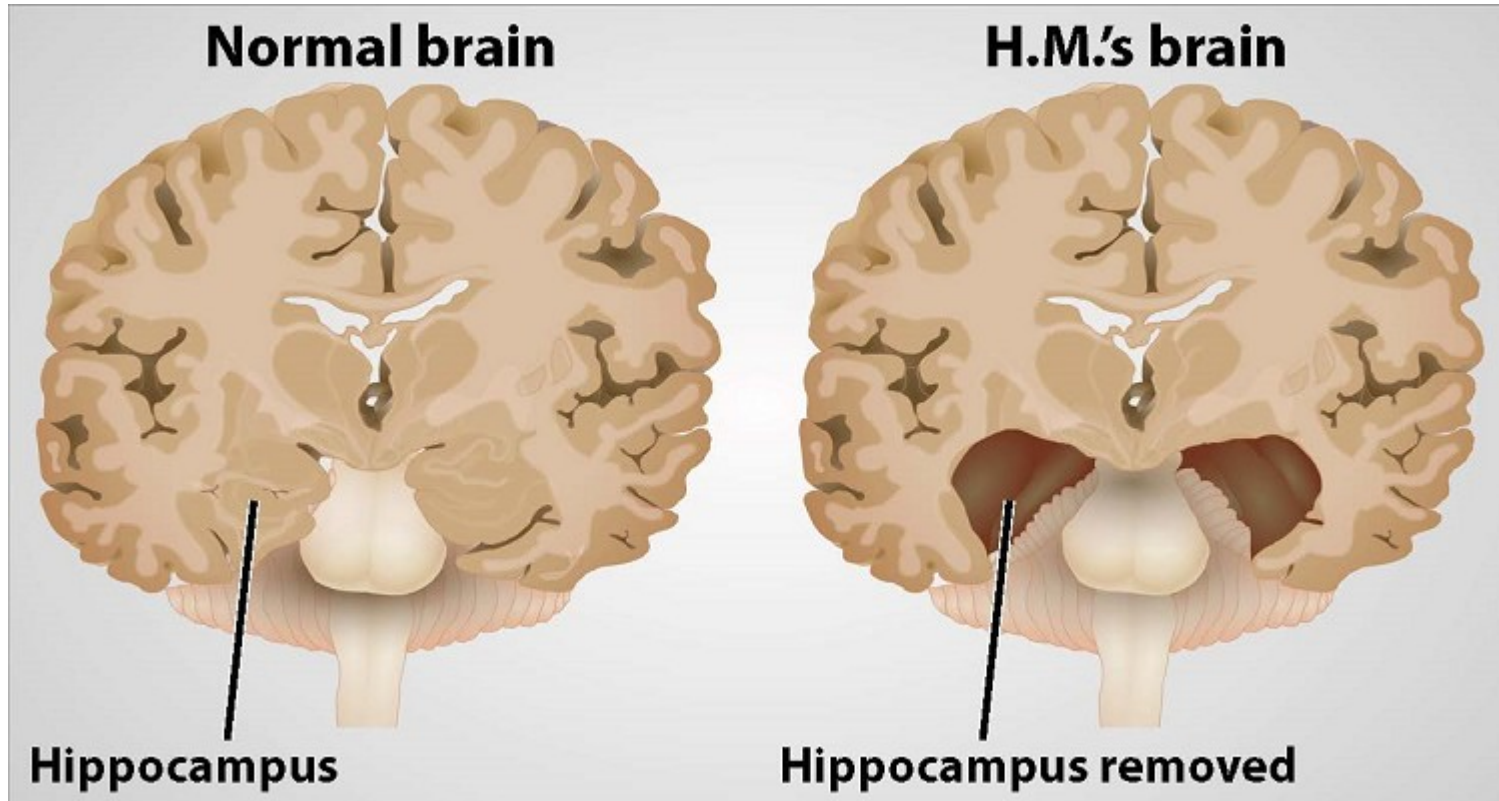
- ¿Olvidamos lo viejo al aprender algo nuevo?

Memoria

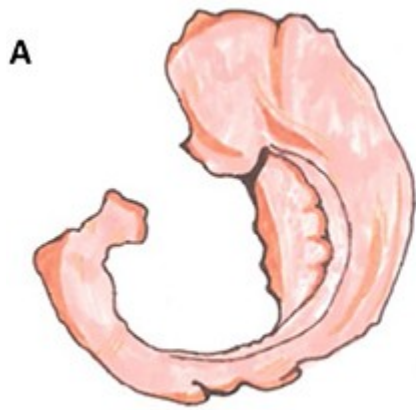


Henry Molaison

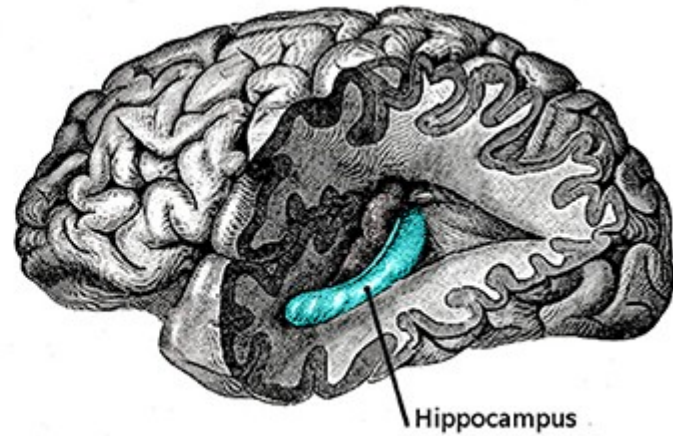
Memoria



Memoria



B



Memoria

- Lesiones de hipocampo
 - Amnesia retrógrada temporalmente graduada
 - Pérdida de información de poco antes de la lesión

Memoria

- Dos sistemas de aprendizaje complementarios
 - Neocortical
 - Procesamiento de información y conducta
 - Tareas de alto nivel
 - Cualquier patrón debe servir como clave de recuperación
 - Información codificada en sinapsis que se modifican lentamente

Memoria

- Dos sistemas de aprendizaje complementarios
 - Hipocampal
 - Cambios rápidos en sinapsis para aprendizaje en corto plazo
 - Representación “comprimida” de la información
 - Ensayo, situaciones relevantes o sueño activan el patrón hipocampal → Se alimenta a la neocorteza.

Memoria

- Dos sistemas de aprendizaje complementarios
 - Hipocampal
 - El hipocampo no es un almacén, sino un maestro.
 - Actualiza lentamente las conexiones de la corteza.
 - La potenciación a largo plazo puede ser la señal que indica los cambios rápidos en el hipocampo

Memoria

- Dos sistemas de aprendizaje complementarios
 - Hipocampal
 - Durante el sueño hay “sharp waves” de repaso hipocampal.
 - Neuronas activadas durante la vigilia se reactivan durante las sharp waves.

Memoria

- Interleaved training
 - Cambios pequeños permiten captar la regularidad y no las características individuales.





Fin

天元突破

光