

DATA ANALYTICS 04|18 MAD

# Beauty is in the Eye of a Computer?

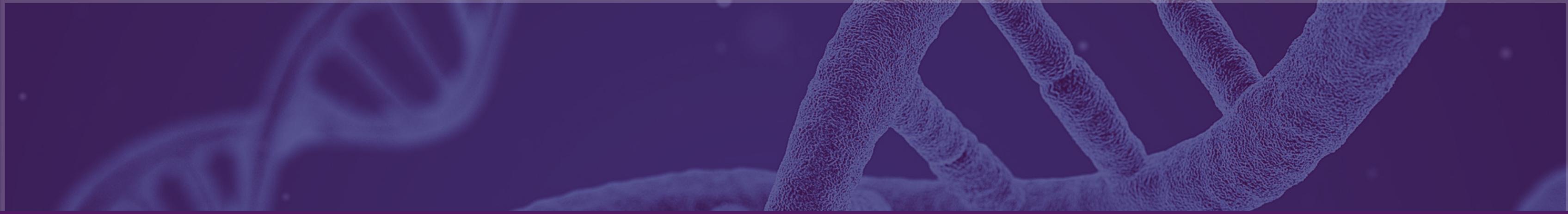
Jessica Brantua



# Subjetividad

# MACHINE LEARNING

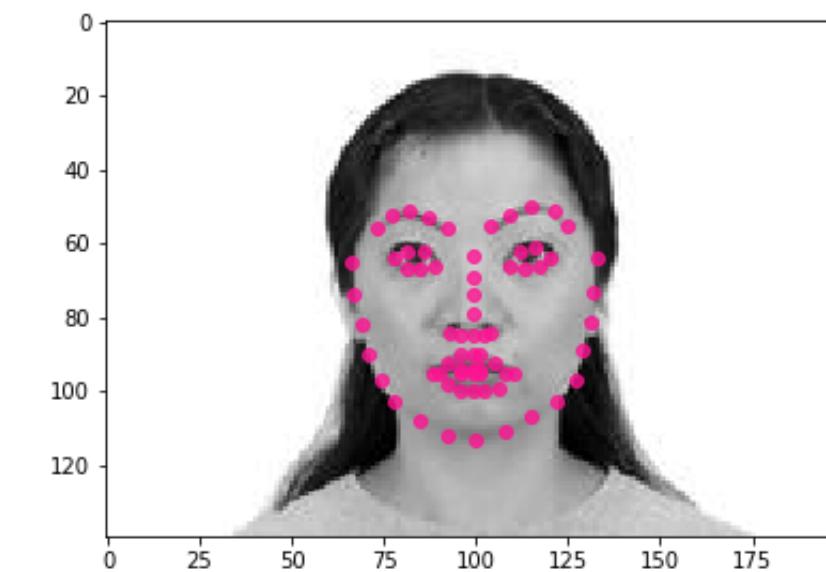
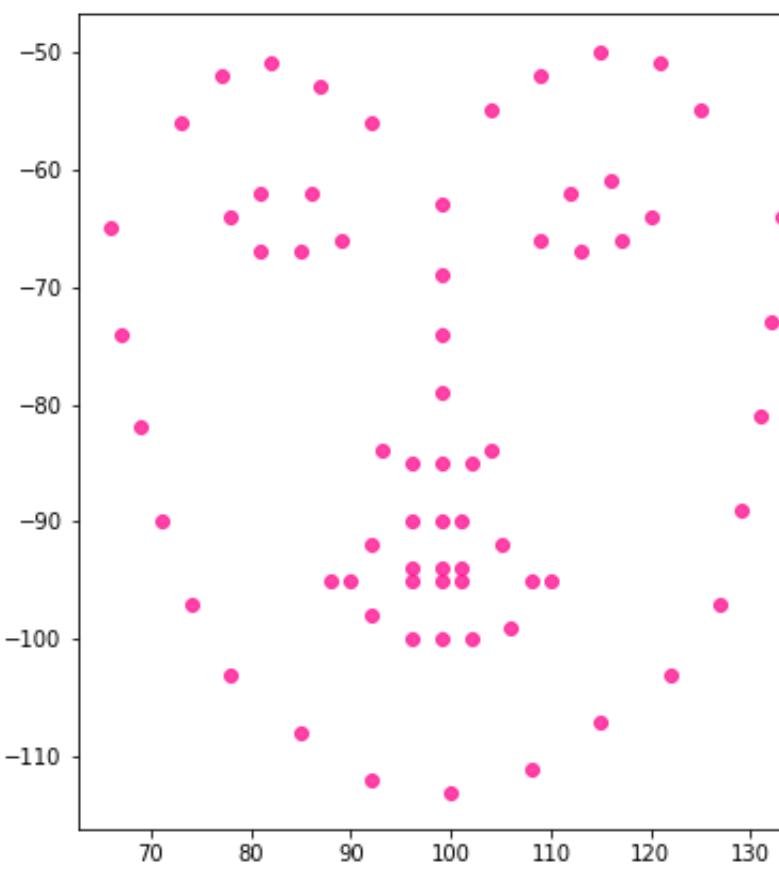
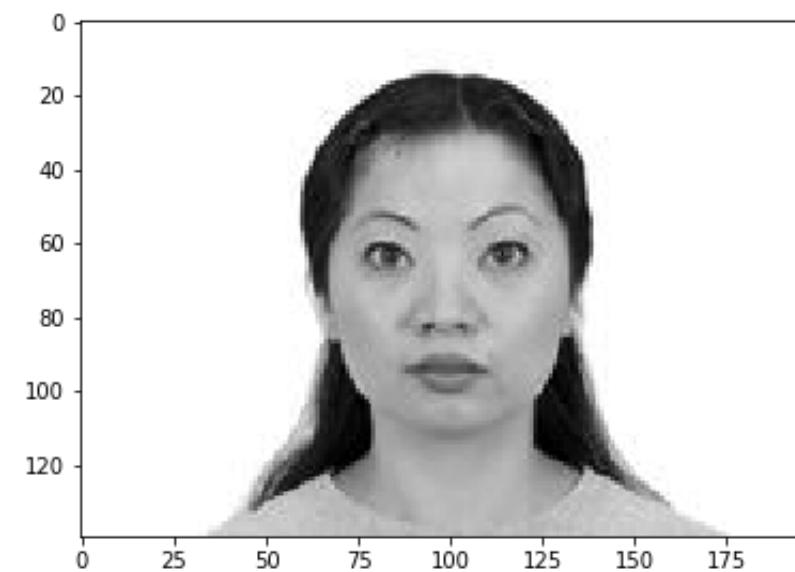
El objetivo del proyecto es que nuestra máquina «red neuronal convolucional» aprenda a clasificar -por sí sola-, dada una nueva imagen de una persona, en un **ránking de 1 a 5** su nivel de atractivo (en base a unos datos preestablecidos).



# Procedimiento

FROM THEORY TO APPLICATION

# Obtención de datos



- Extraemos las imágenes
- Las transformamos a blanco y negro
- Sacamos los píxeles

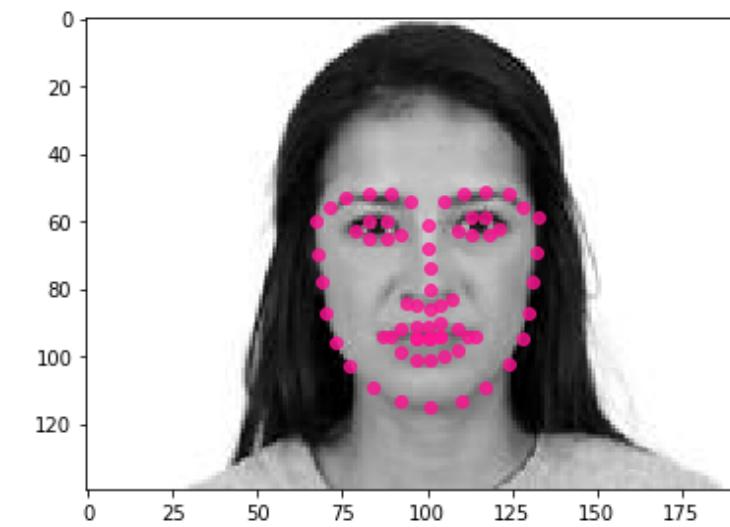
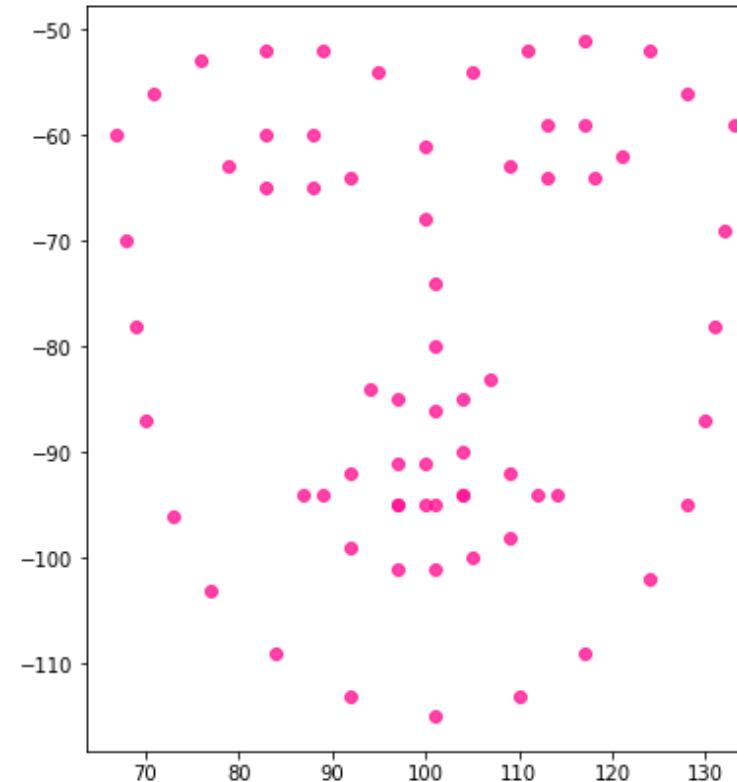
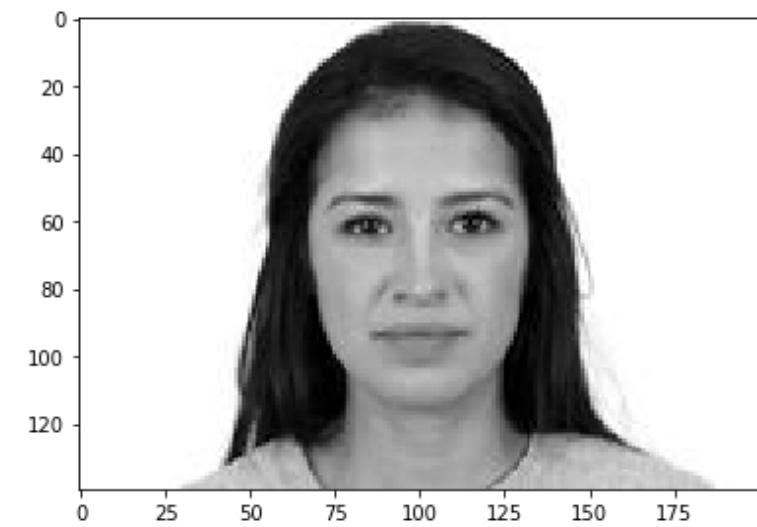
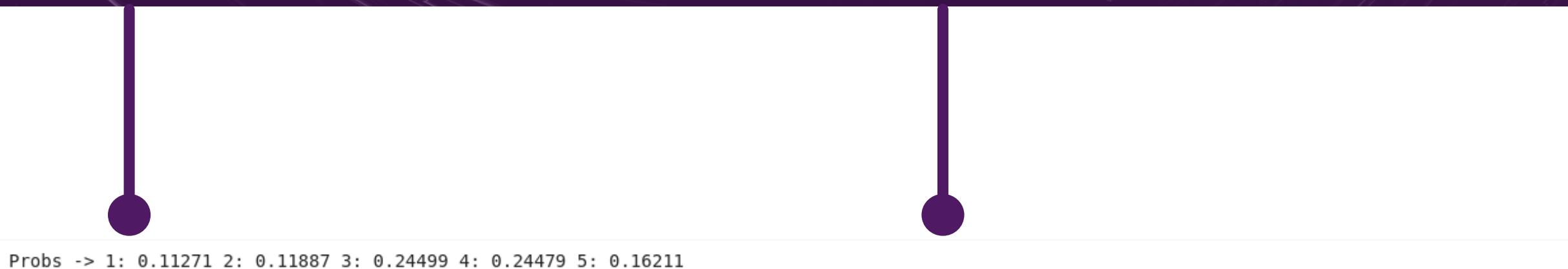
- Adquirimos los puntos faciales o landmarks
- Los landmarks son únicos para cada imagen

# REDES NEURONALES

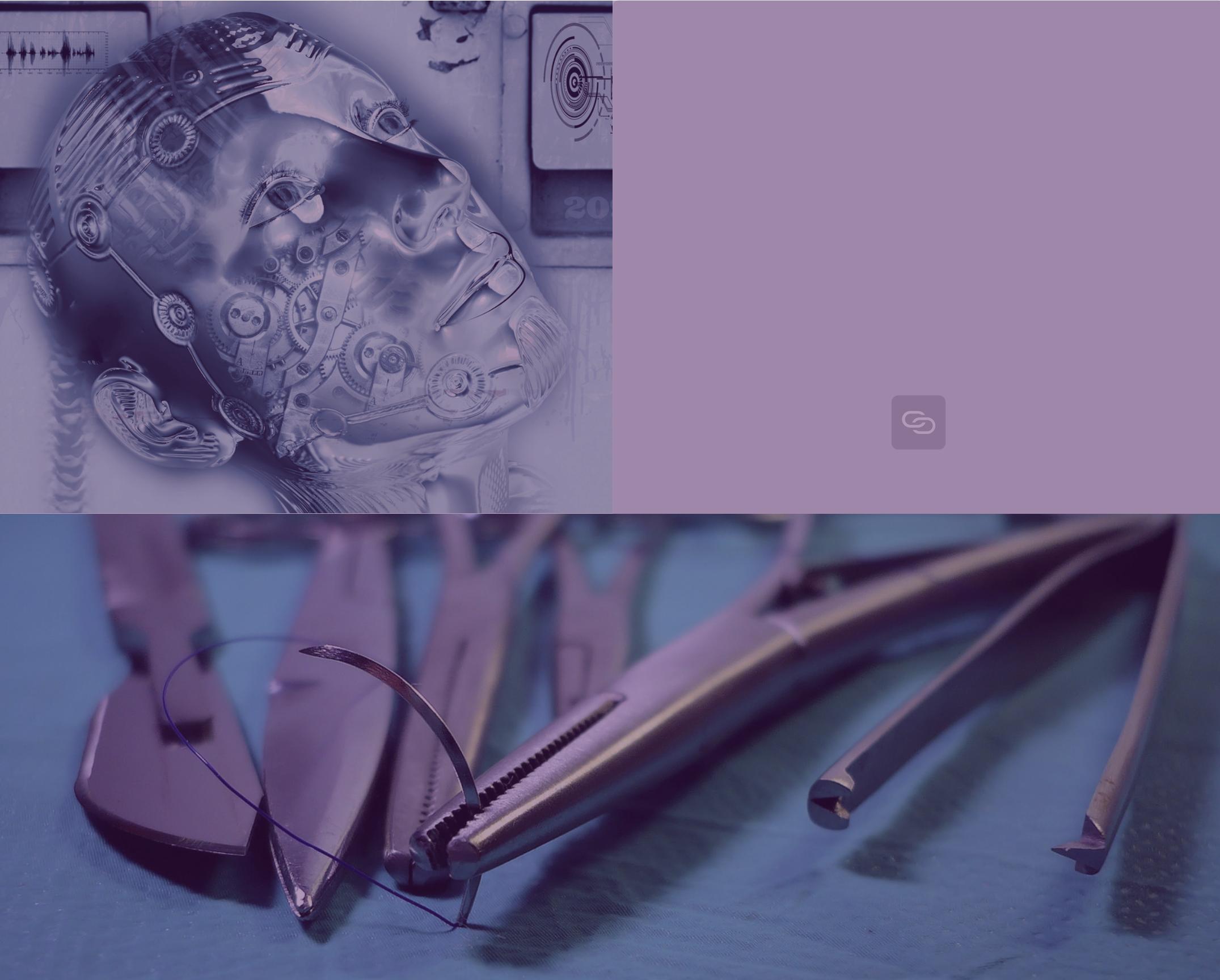
Test loss: 1.50  
Test accuracy: 0.40

```
Train on 477 samples, validate on 120 samples
Epoch 1/10
477/477 [=====] - 403s 846ms/step - loss: 1.7772 - acc: 0.3585 - val_loss: 1.7606 - val_acc: 0.4083
Epoch 2/10
477/477 [=====] - 406s 850ms/step - loss: 1.7462 - acc: 0.3920 - val_loss: 1.7305 - val_acc: 0.4083
Epoch 3/10
477/477 [=====] - 405s 850ms/step - loss: 1.7168 - acc: 0.3962 - val_loss: 1.7019 - val_acc: 0.4083
Epoch 4/10
477/477 [=====] - 405s 848ms/step - loss: 1.6887 - acc: 0.3962 - val_loss: 1.6745 - val_acc: 0.4083
Epoch 5/10
477/477 [=====] - 403s 845ms/step - loss: 1.6619 - acc: 0.3962 - val_loss: 1.6484 - val_acc: 0.4083
Epoch 6/10
477/477 [=====] - 404s 847ms/step - loss: 1.6365 - acc: 0.3836 - val_loss: 1.6237 - val_acc: 0.4083
Epoch 7/10
477/477 [=====] - 405s 850ms/step - loss: 1.6124 - acc: 0.3962 - val_loss: 1.6004 - val_acc: 0.4083
Epoch 8/10
477/477 [=====] - 405s 850ms/step - loss: 1.5896 - acc: 0.3962 - val_loss: 1.5783 - val_acc: 0.4083
Epoch 9/10
477/477 [=====] - 406s 850ms/step - loss: 1.5679 - acc: 0.3962 - val_loss: 1.5572 - val_acc: 0.4083
Epoch 10/10
477/477 [=====] - 406s 852ms/step - loss: 1.5473 - acc: 0.3732 - val_loss: 1.5373 - val_acc: 0.4083
<keras.callbacks.History at 0x7f5eee2eaa58>
```

# Modelando en muestra



Uso de imagen de test:  
La nota que tenía en el  
dataset era de: 5



## FUTUROS AVANCES

- Mejora del nivel de acierto
- Aplicación de un recomendador de cirugía estética para incrementar el resultado del ranking

# The Brain vs. the Mind

**DATASET USADO:**

Chicago Face Database v. 2.0.3 – Julio '16

