

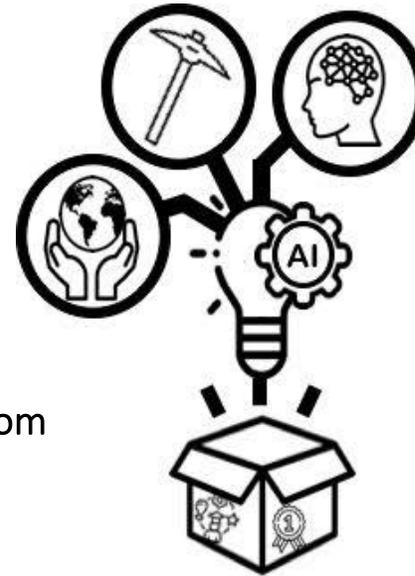
A scenic landscape featuring a calm body of water in the foreground, which perfectly reflects the surrounding trees. The trees are in various stages of autumn, with some showing vibrant orange and red foliage, while others are bare with dark, intricate branches. The background shows a line of trees under a soft, hazy sky, suggesting a late afternoon or early morning setting. The overall mood is peaceful and serene.

Utilização de Redes
Neurais com Aprendizagem profunda para
detectar e reconhecer pessoas
em vídeos.



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Produtor de Conteúdo Digital
Cientista de Dados Senior
Fundador: Mining Solutions AI

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**MINING SOLUTIONS
AI**





IN
60
SECONDS.

GO-Globe
CUSTOM WEB DEVELOPMENT

14,000,000
MESSAGES PROCESSED
486,000
PHOTOS



26
NEW REVIEWS
POSTED ON YELP

120
NEW ACCOUNTS
OPENED ON
LINKEDIN

MORE THAN
140
SUBMISSIONS
ON REDDIT



MORE THAN
2,315,000
SEARCHES

3,125,000
243,055



MORE THAN
3,000,000
ITEMS ARE
SHARED

MORE THAN
18,000
MATCHES MADE

972,000
DAILY SWIPES
ON TINDER



MORE THAN
150,000,000
E-MAILS ARE SENT

NETFLIX

MORE THAN
69,500
HOURS OF
VIDEO WATCHED
ON NETFLIX

MORE THAN
48,000
APPS DOWNLOADED
ON IPHONE



MORE THAN
95,000
APPS DOWNLOADED
ON ANDROID

GO-Globe
CUSTOM WEB DEVELOPMENT

YouTube

MORE THAN
2,700,000
VIDEO VIEWS AND
139,000 HOURS
OF VIDEO WATCHED



MORE THAN
430,000
TWEETS SENT

MORE THAN
39,300
HOURS OF MUSIC
LISTENED



14 NEW
SONGS ADDED
ON SPOTIFY

MORE THAN
300 HOURS
OF VIDEO ARE UPLOADED

MORE THAN
100
NEW DOMAINS
REGISTERED

MORE THAN
280,000
SNAPS SENT
ON SNAPCHAT

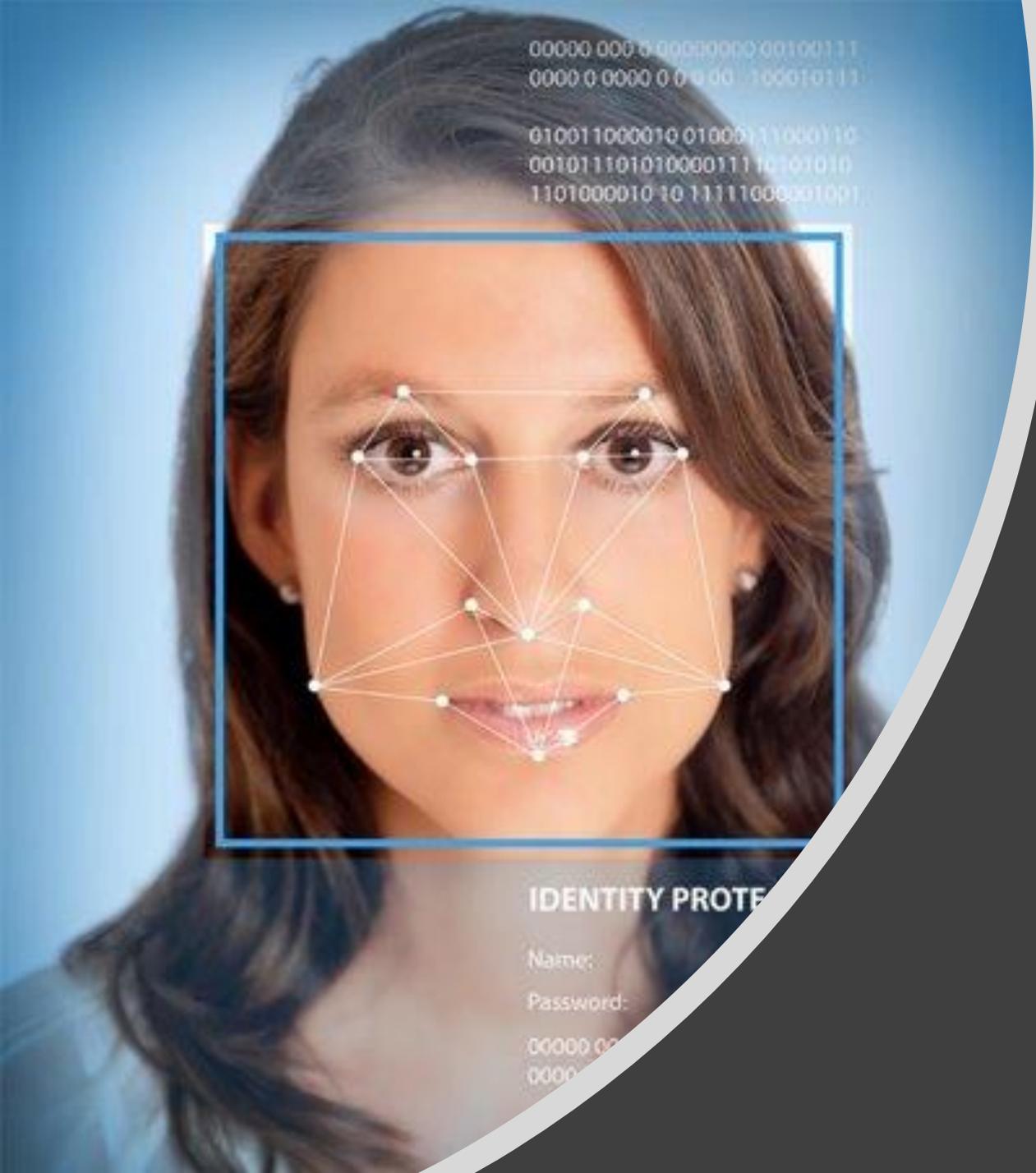


9,800
ARTICLES PINNED
ON PINTEREST



AROUND
56,000
PHOTOS
UPLOADED





00000 000 0 00000000 00100111
0000 0 0000 0 0 0 00 100010111

010011000010 01000111000110
001011101010000111 10101010
1101000010 10 11111000001001

IDENTITY PROTE

Name:

Password:

00000 00

0000

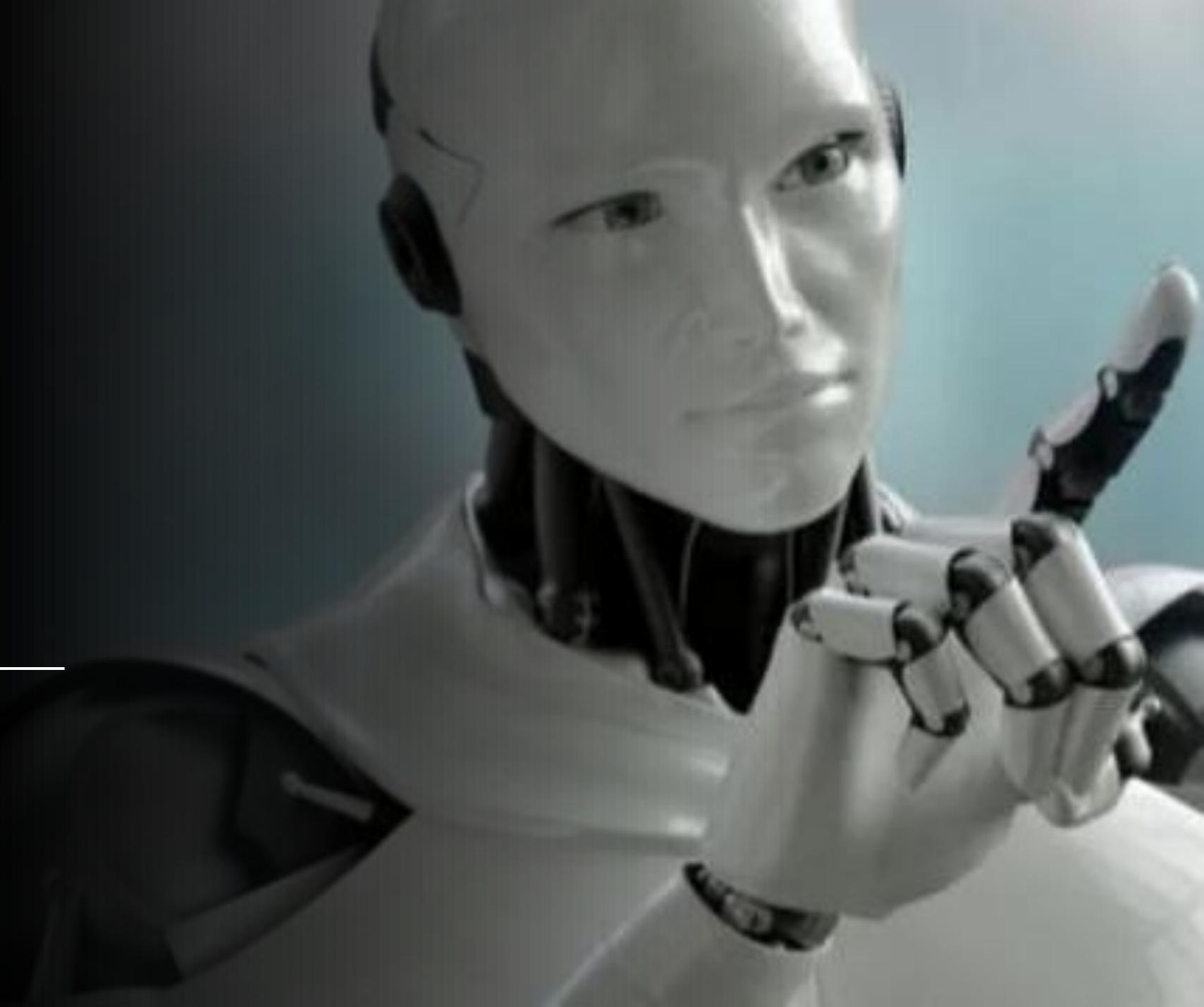
Detecção e Reconhecimento de Faces

Aplicações

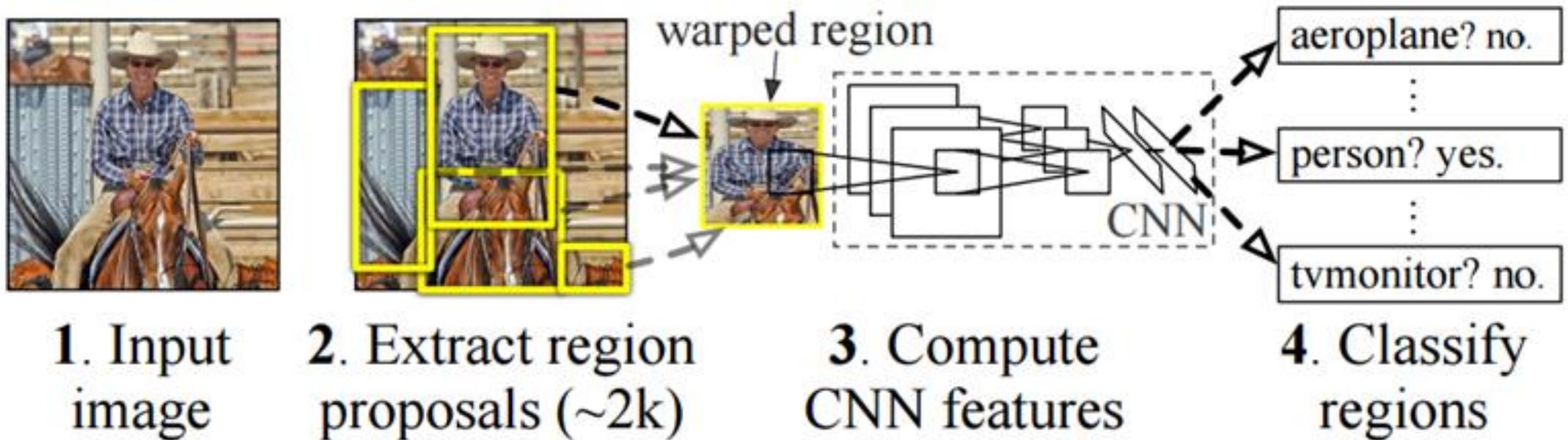




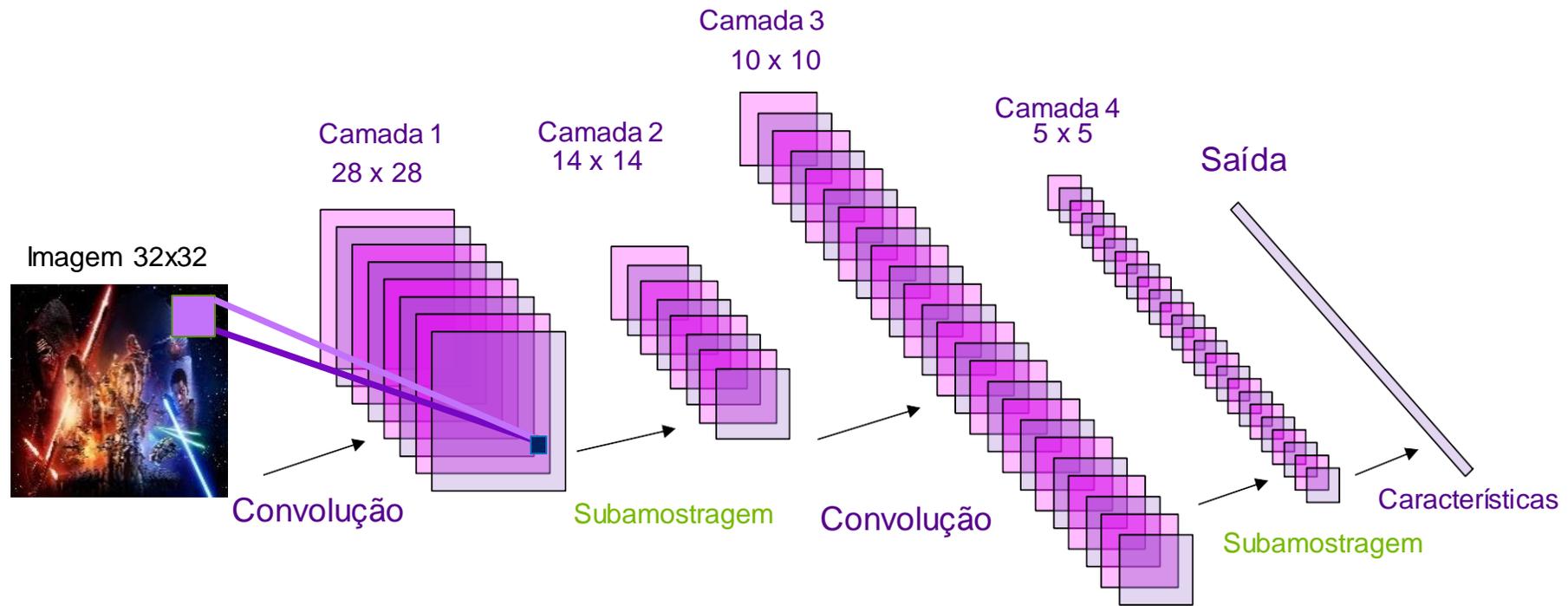
Deep Learning



Camadas para Extração de Features

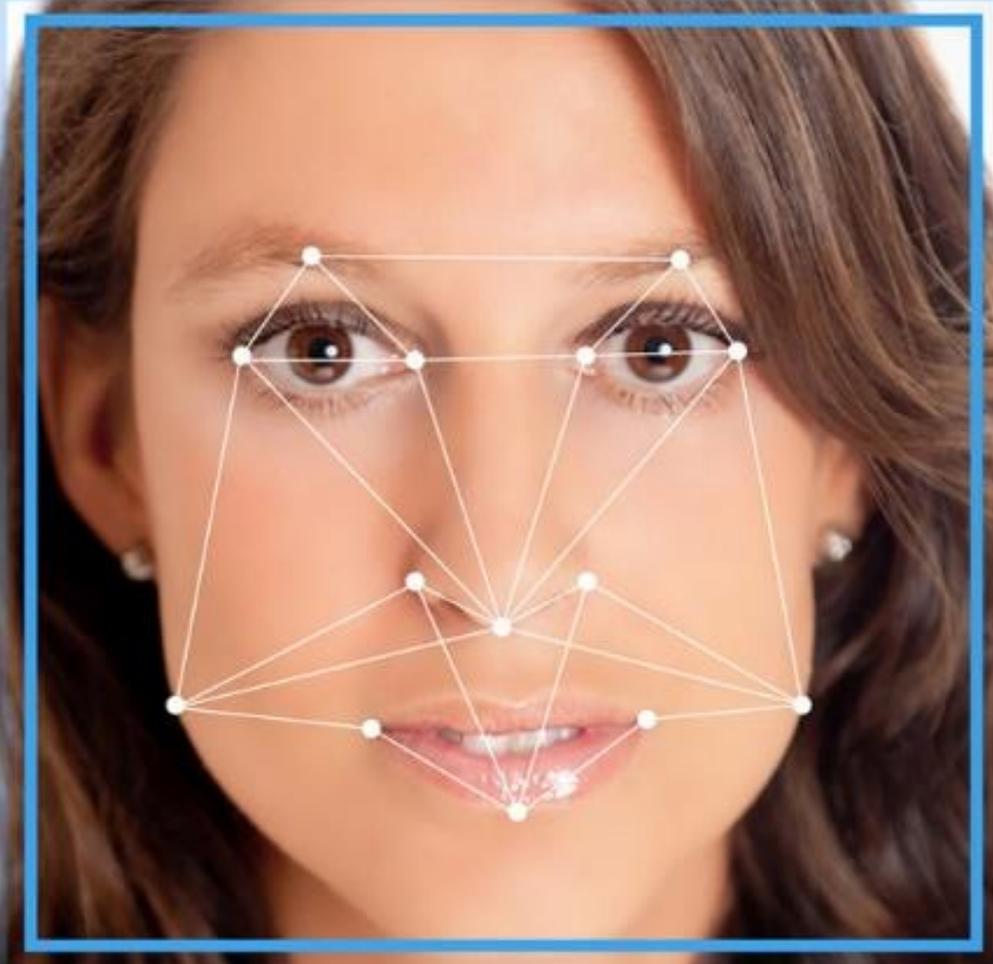


Redes Convolucionais



Detecção de Faces

010011000010 01000111000110
00101110101000011110101010
1101000010 10 11111000001001

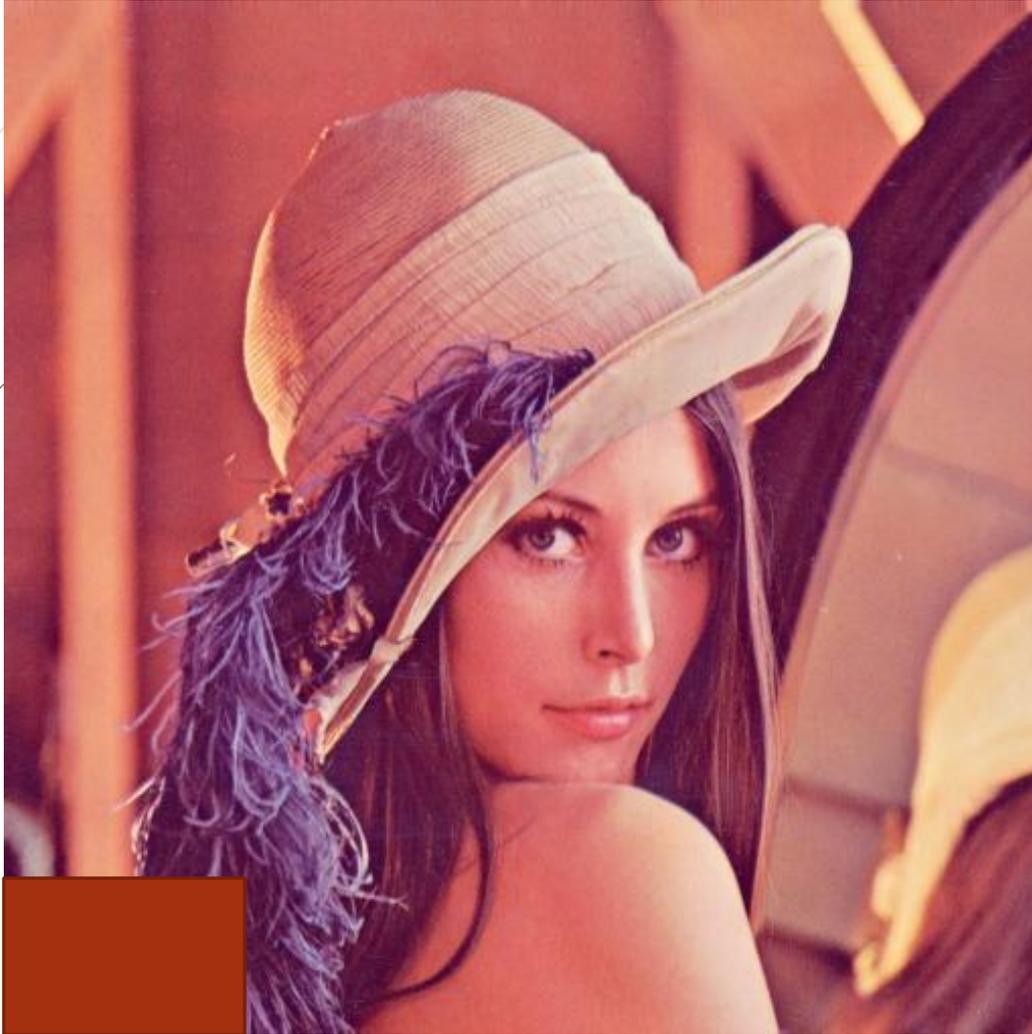


IDENTITY PROTECTION

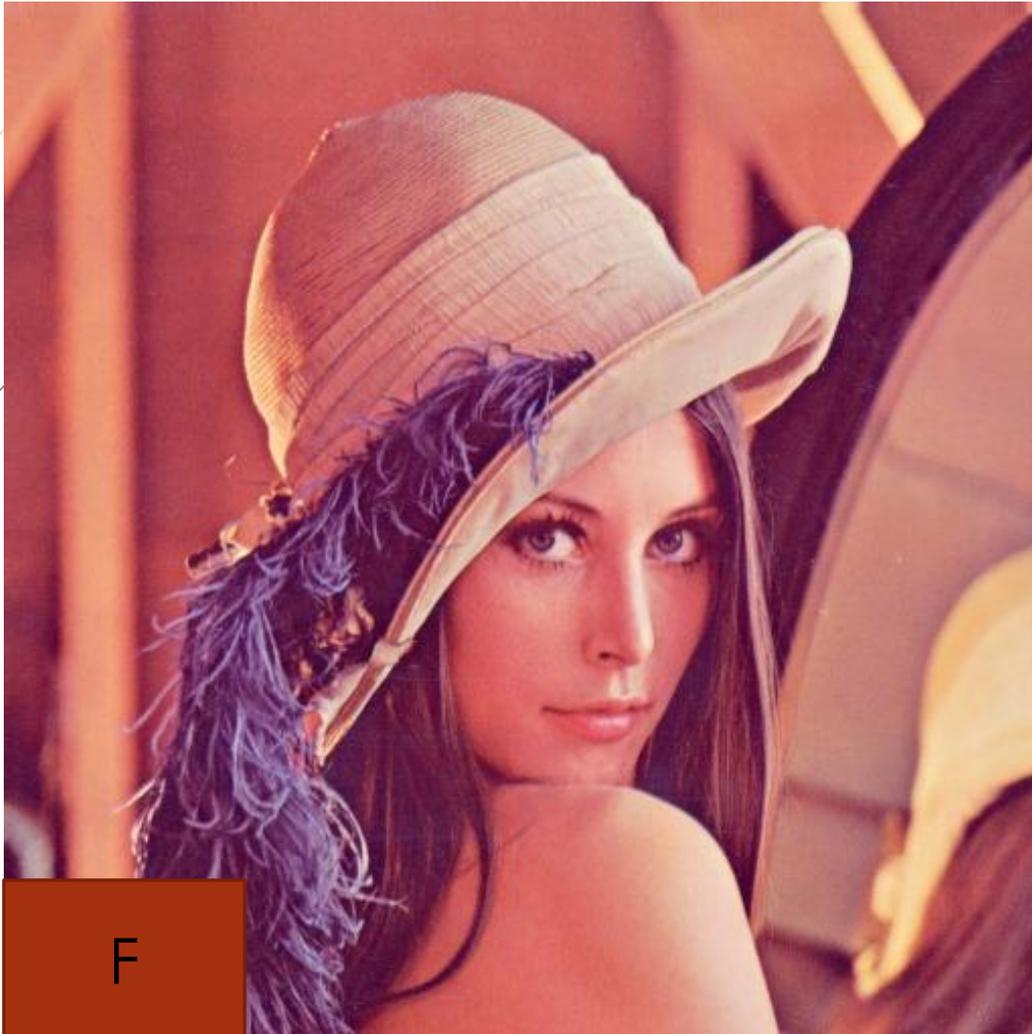
Name:

Password:

Detecção de Faces

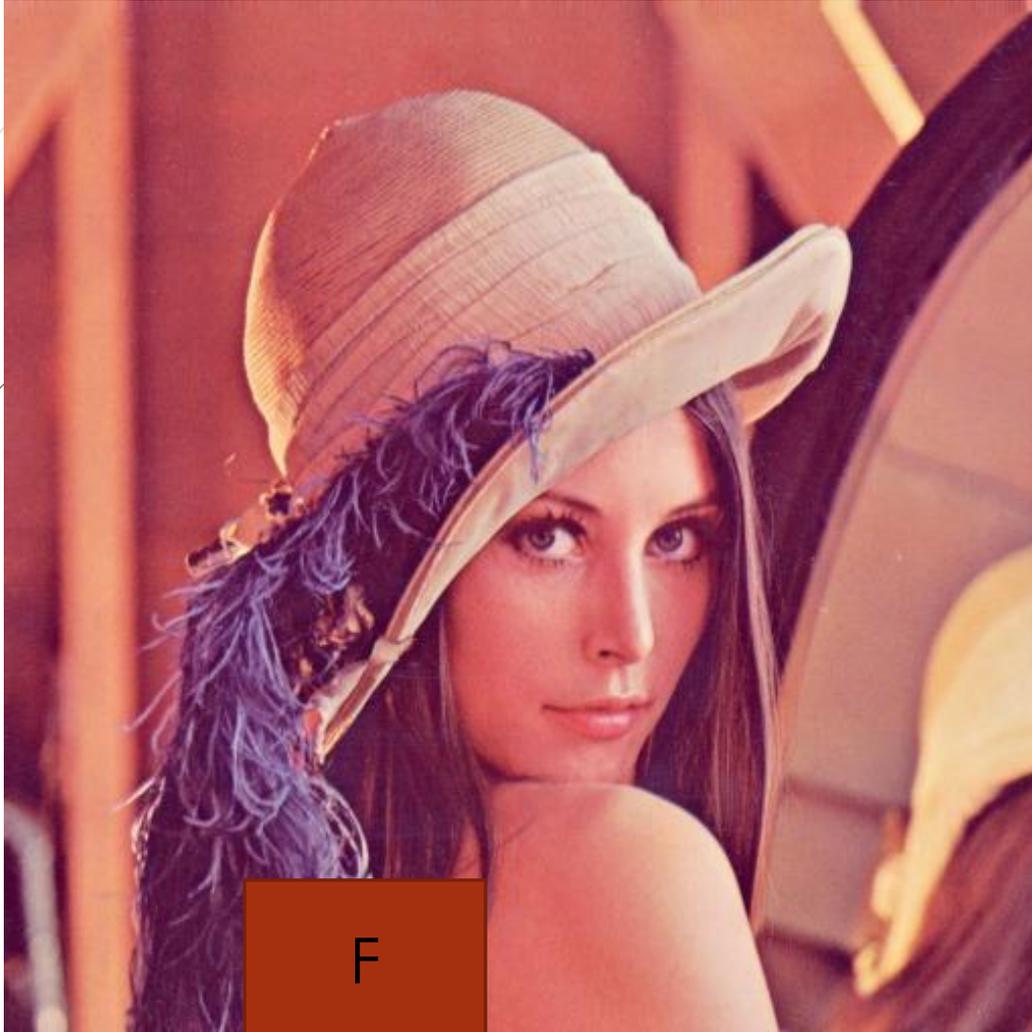


Detecção de Faces

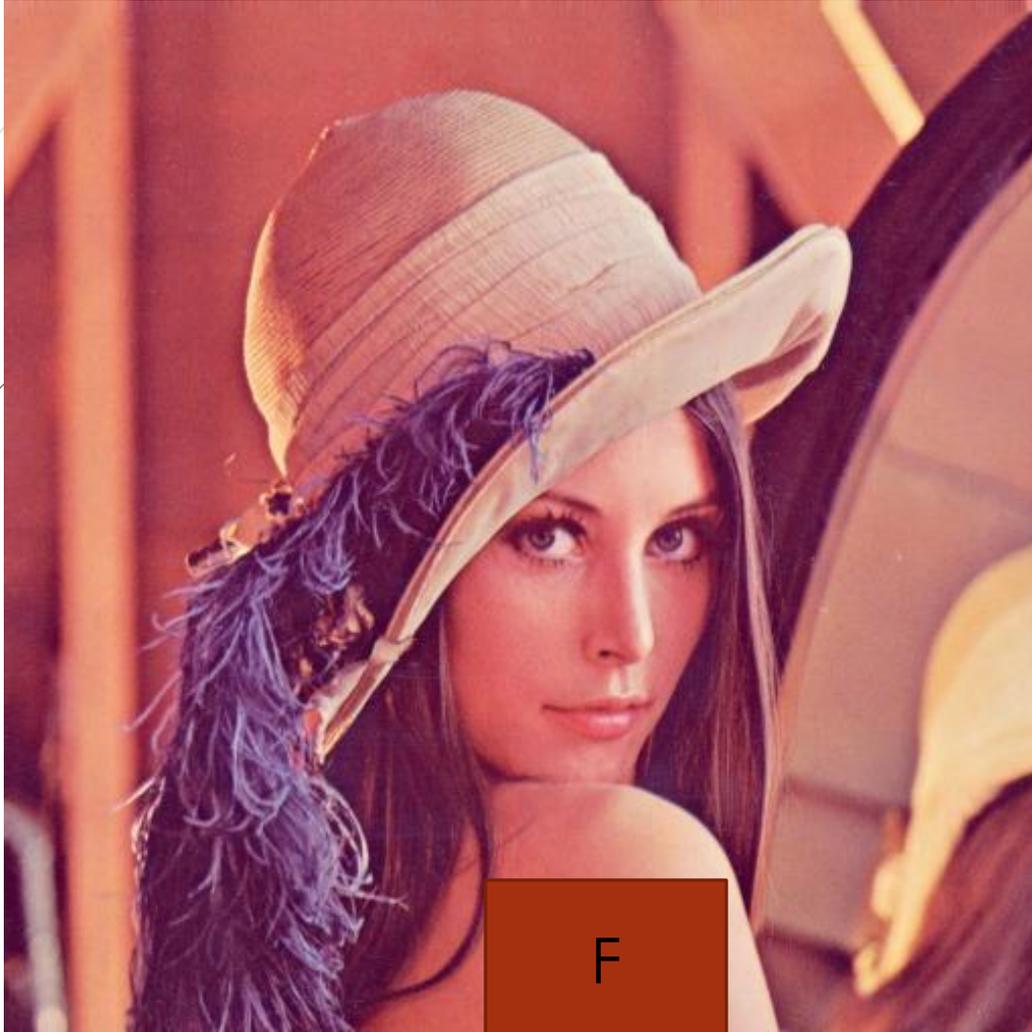


F

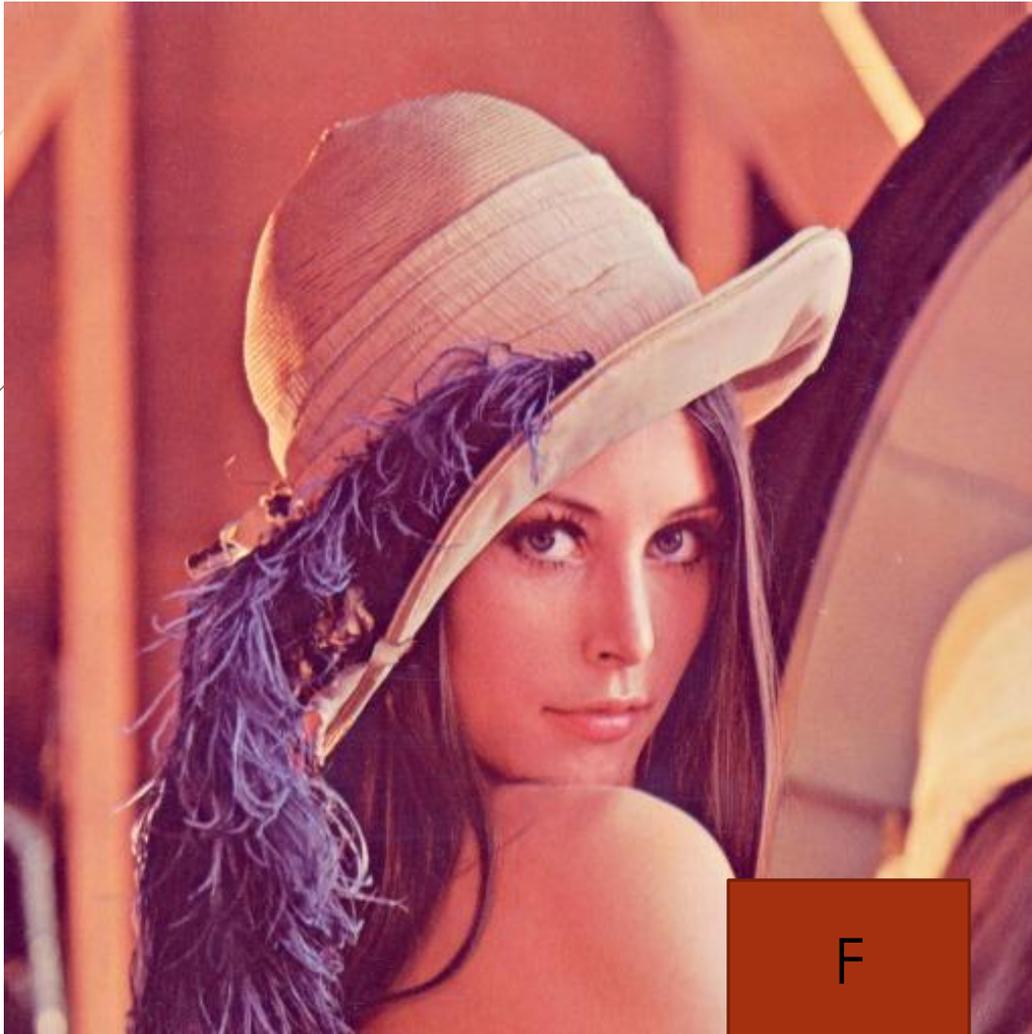
Detecção de Faces



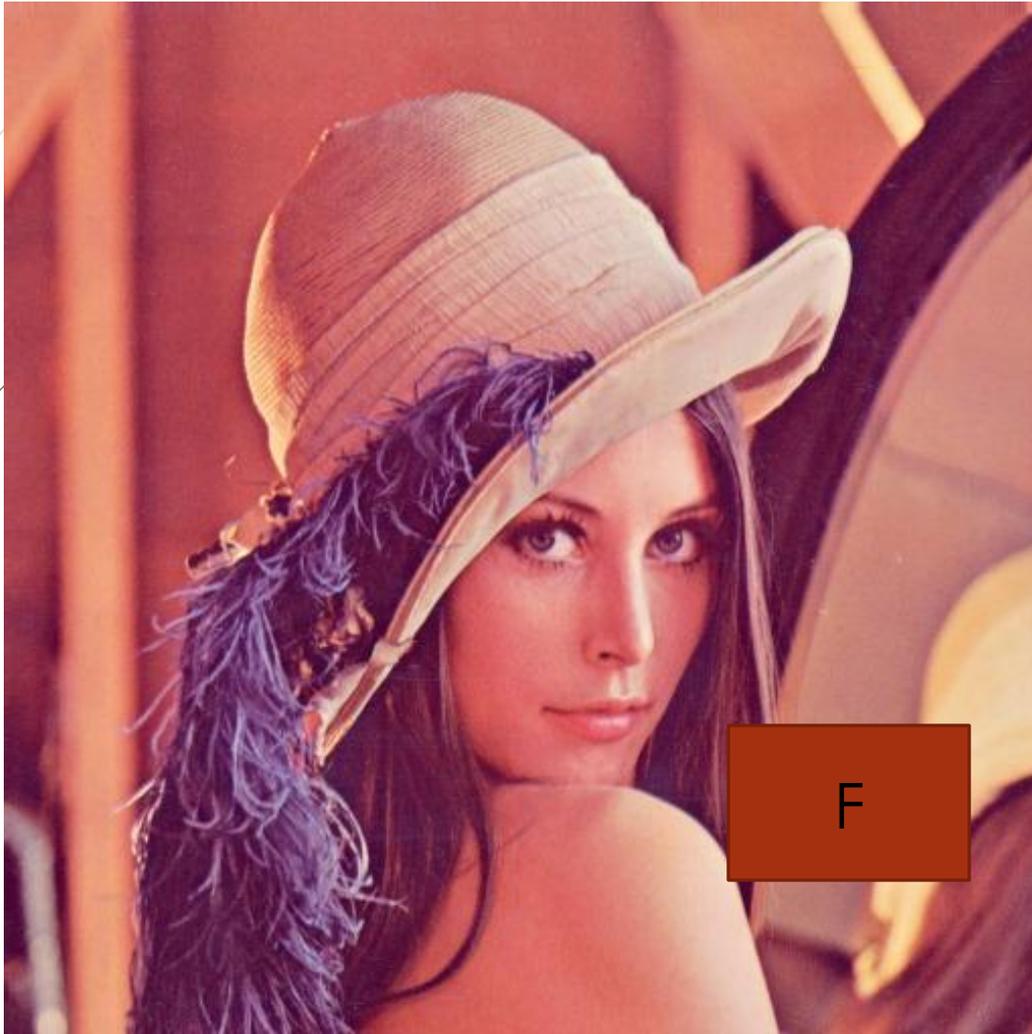
Detecção de Faces



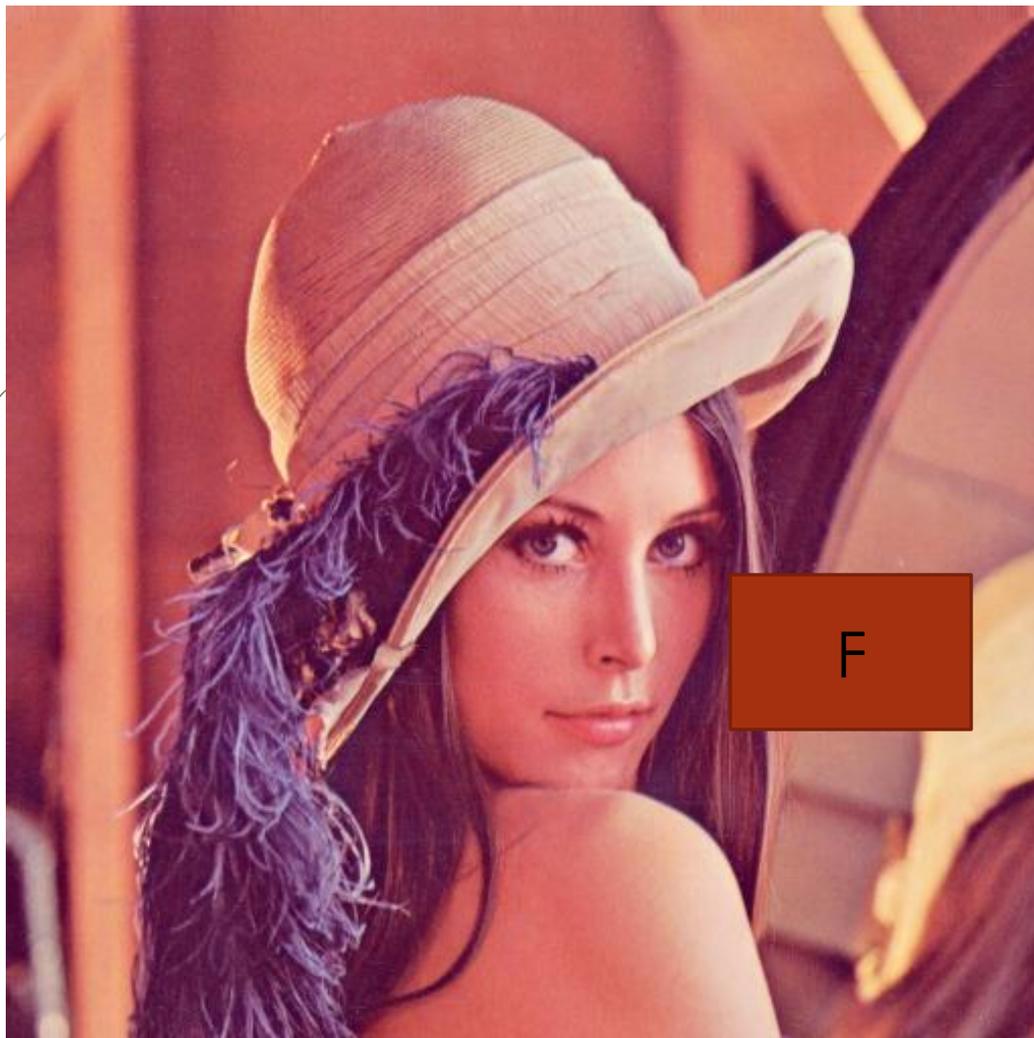
Detecção de Faces



Detecção de Faces



Detecção de Faces



Detecção de Faces



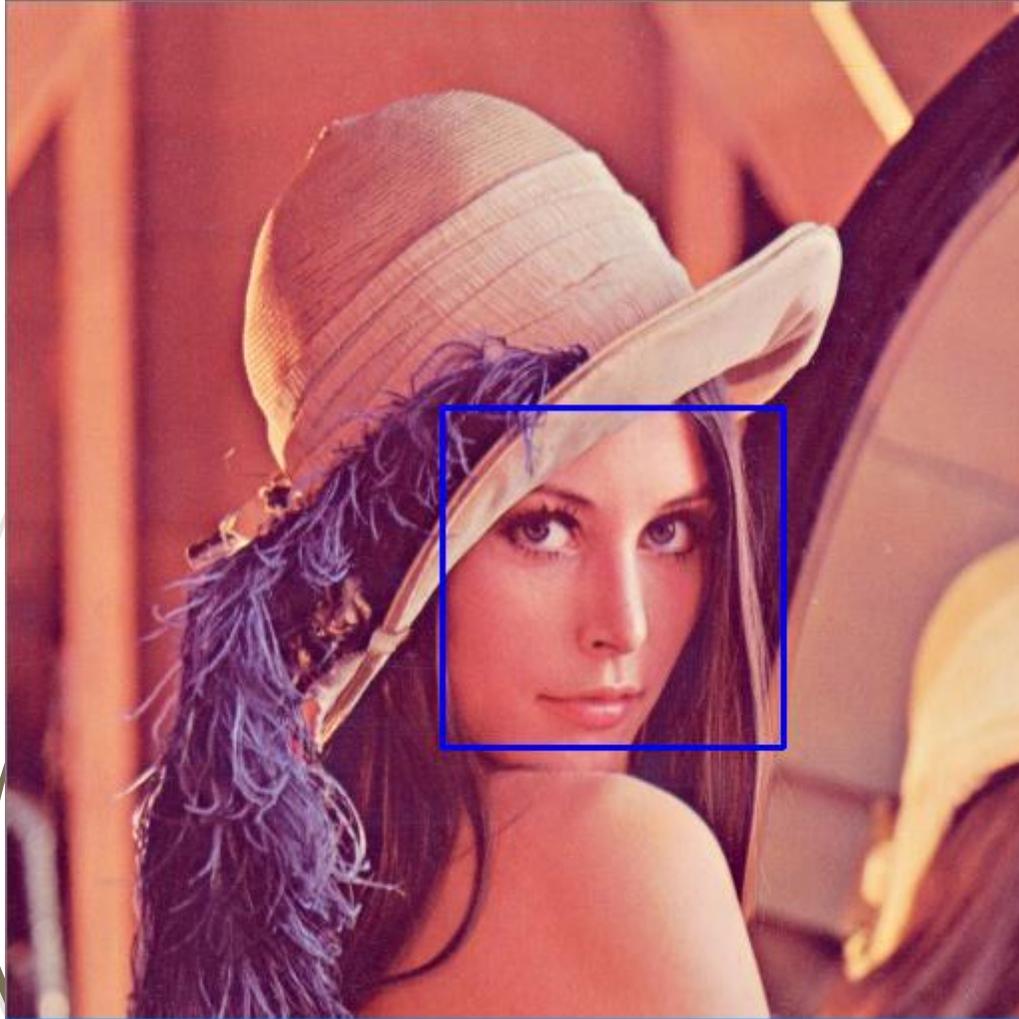
Detecção de Faces



Detecção de Faces



Detecção de Faces





Reconhecimento de Imagens

Reconhecimento de Imagens

- Similaridade de Imagens: Determina o quanto uma imagem é similar a outra imagem;
- Similaridade x Igualdade de Imagens

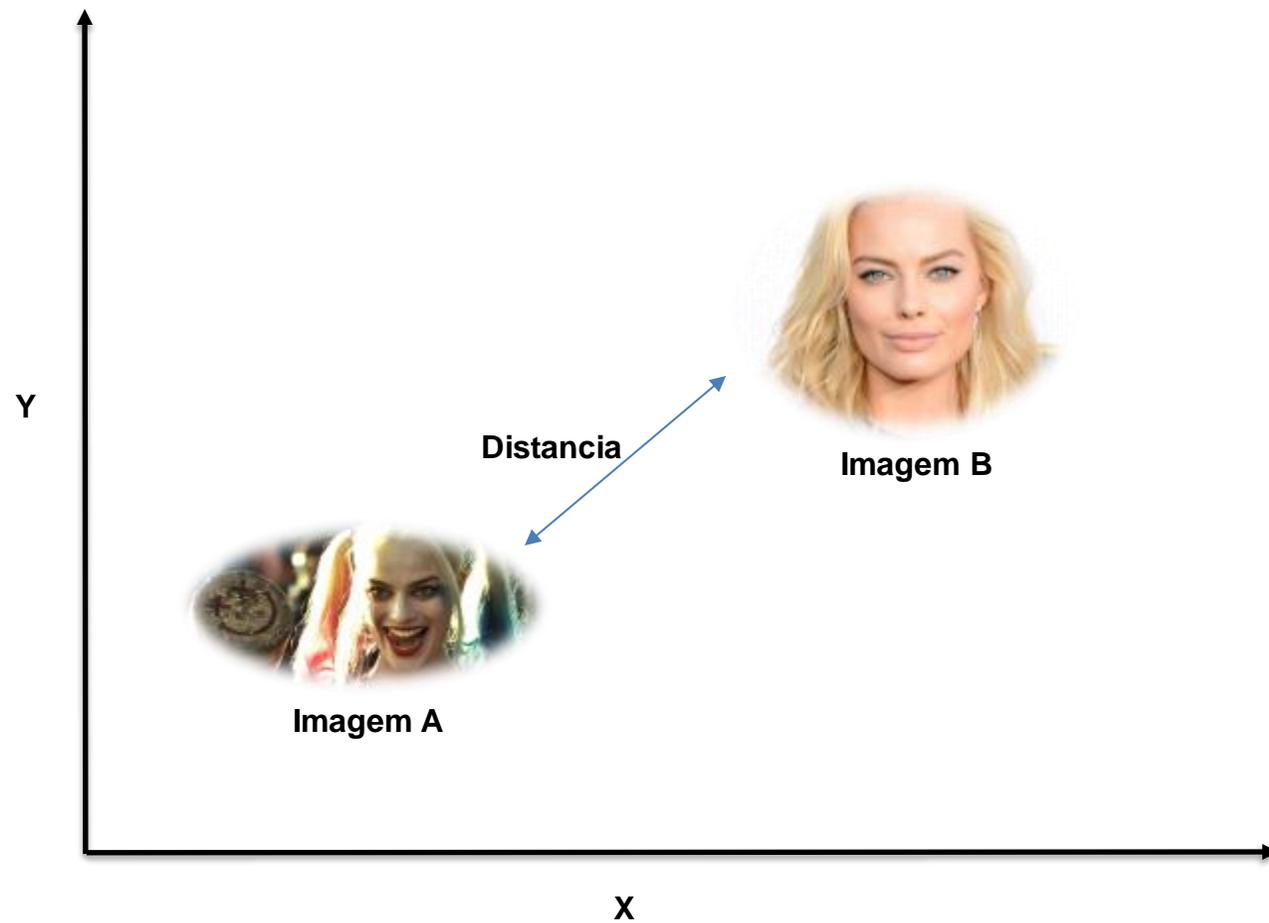


Imagem A



Imagem B

Espaço Vetorial



REPRESENTAÇÃO

Representação Visual



Imagem A

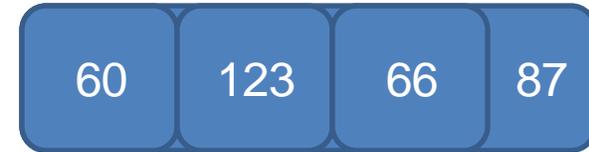


Imagem B

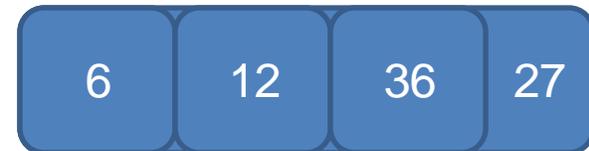
Técnica

- Histograma do canal de cor (RGB)
- Descritor de forma da Imagem
- Descritor de Brilho
- Outros descritores visuais

Representação Vetorial



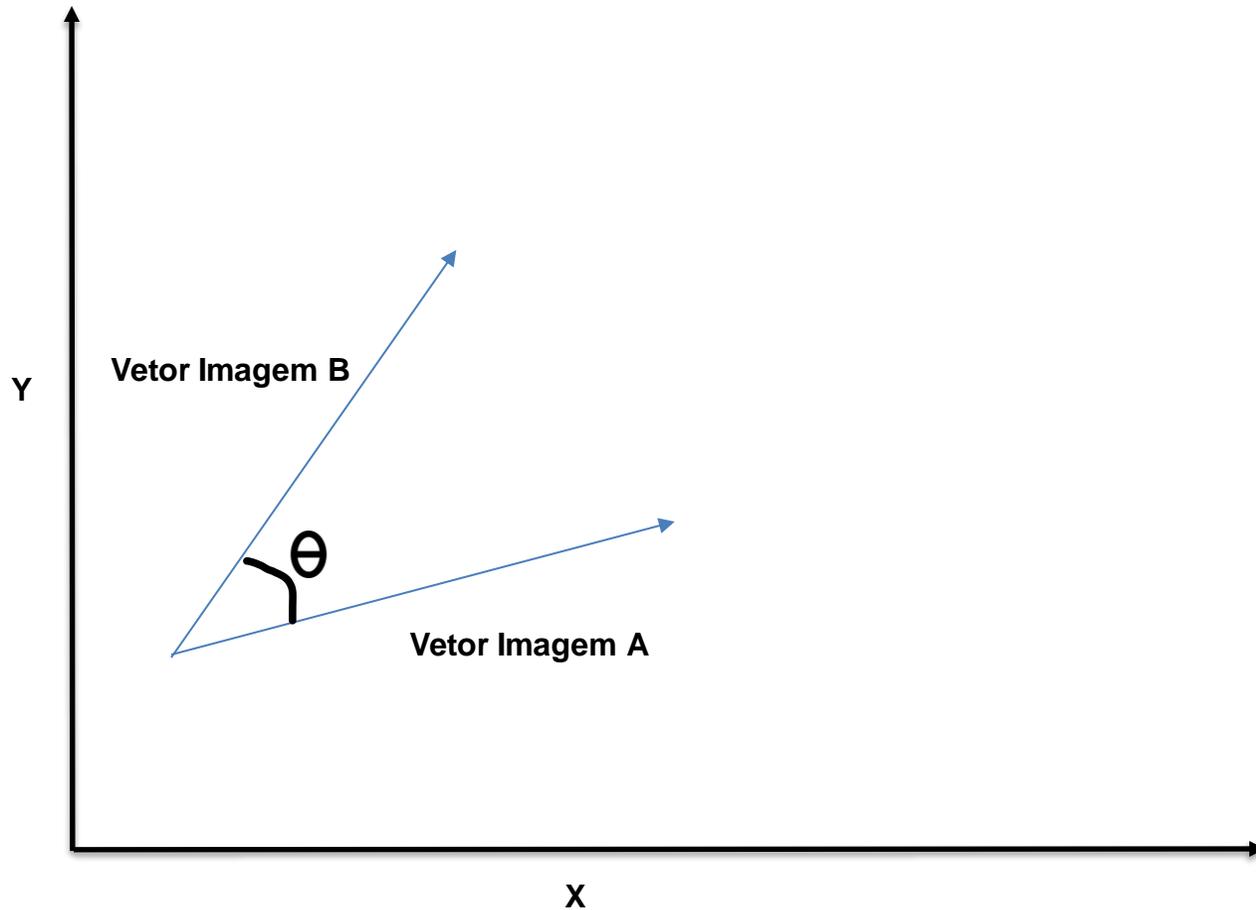
Vetor Imagem A



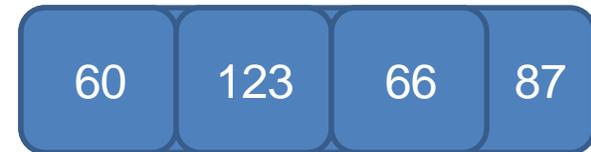
Vetor Imagem B



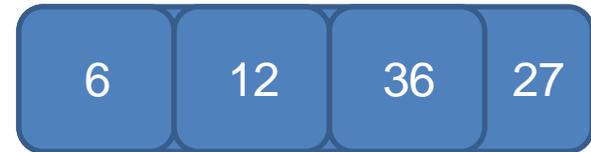
Similaridade do Cosseno



Representação Vetorial



Vetor Imagem A



Vetor Imagem B

Similaridade do Cosseno

Representação Vetorial



Vetor Imagem A



Vetor Imagem B

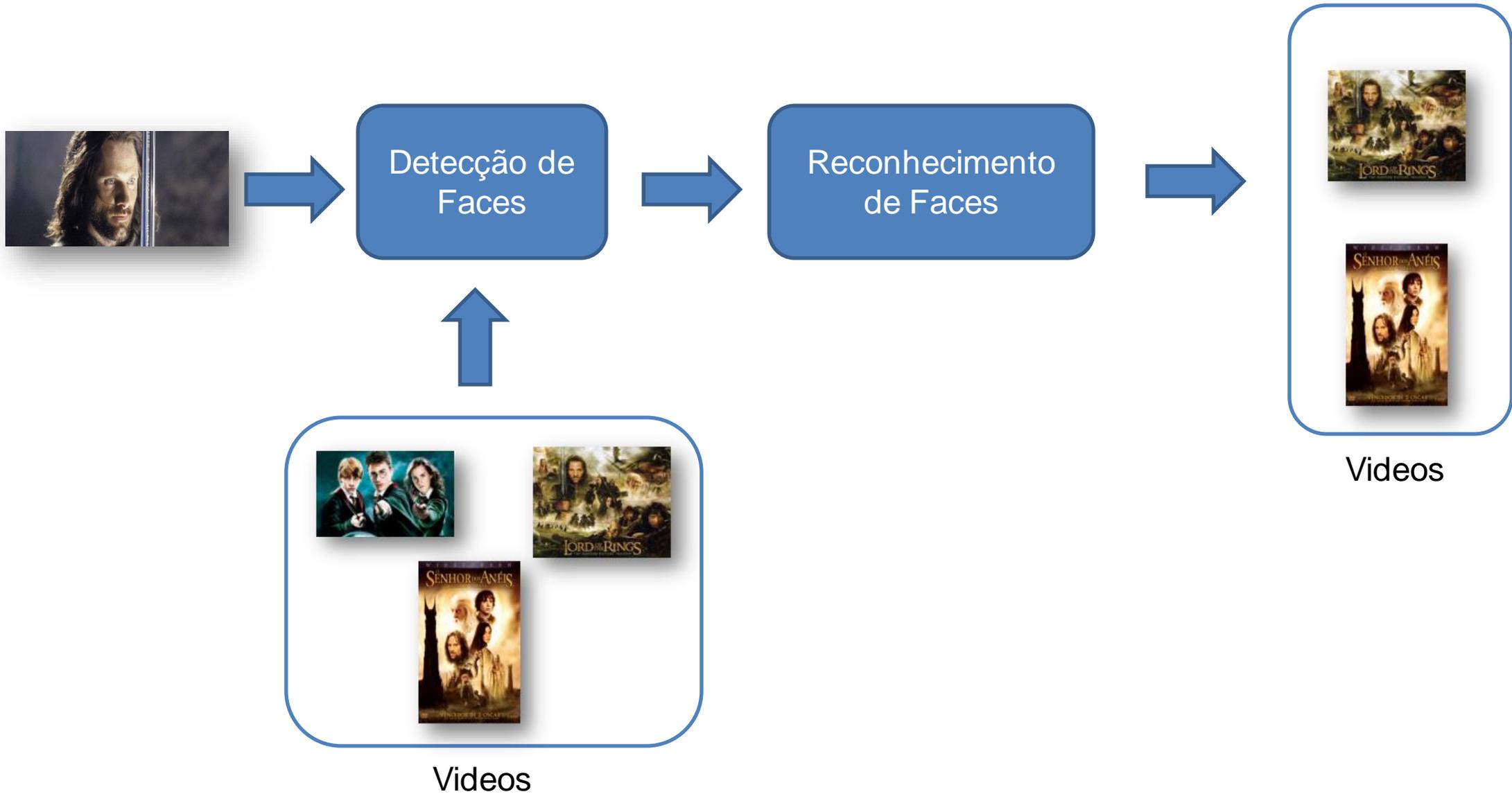
$$\text{similarity} = \cos(\theta) = \frac{\mathbf{A} \cdot \mathbf{B}}{\|\mathbf{A}\| \|\mathbf{B}\|} = \frac{\sum_{i=1}^n A_i B_i}{\sqrt{\sum_{i=1}^n A_i^2} \sqrt{\sum_{i=1}^n B_i^2}},$$

Threshold: Limite inferior de similaridade para considerar que duas imagens são similares / idênticas.



Recohecimento de Faces em Videos

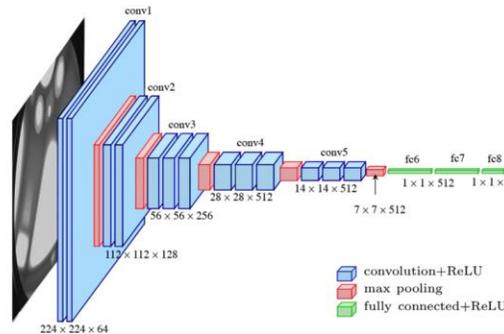
Recohecimento de Faces em Videos



Extração de Características



Query



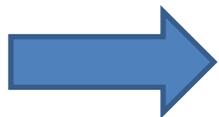
Deep Learning (CNN)



Descriptor Visual



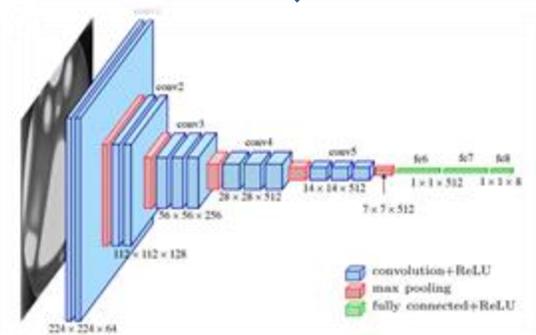
Vídeo



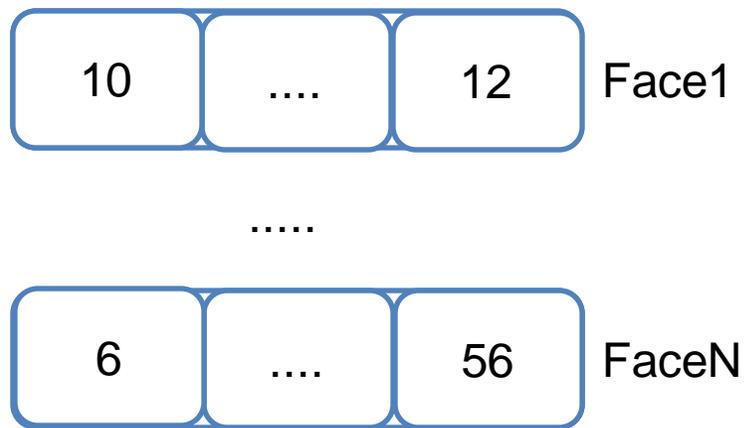
Frames



Faces (Viola Jones)



Deep Learning (CNN)



Descriptor Visual

Reconhecimento de Faces



Query



Face Frame X

Similaridade
do Cosseno

Valor entre 0(0%) e 1(100%)

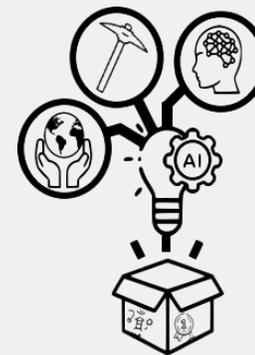
Se Similaridade > 0.9

Query é similar a face
comparada





Material
Complementar



MINING SOLUTIONS
AI