# The History Of Computer Vision

In the decade 2000s, By Ezra Bakatubia

### 2010

Convolutional Neural Networks (or CNN) began gaining traction in computer vision during 2010, along with advancements like

Deformable Part Models for object detection. These breakthroughs improved technologies like face detection and tracking in surveillance and photography.

### 2012

AlexNet in 2012, was able to achieve a historic reduction in image classification errors. This sparked the deep learning revolution, influencing applications like digital assistants and photo organization.

### 2014

lan Goodfellow introduced GANs in 2014, enabling realistic image generation through adversarial training. That same year, Ross Girshick's Fast RCNN improved object detection speed and accuracy. Including applications in gaming, augmented reality, and photo editing.

Kaiming He and his team introduced ResNet in 2015, allowing deep networks to scale without performance loss

Joseph Redmon's YOLO framework revolutionized real-time object detection by processing images in a single pass.

Mask R-CNN extended Faster R-CNN in 2017, adding capabilities for detailed object segmentation. Transformers, initially for language processing, began reshaping tasks like image generation and captioning.

2015

2016

2017

# **Timeline Part 2**



2018



GAN-based deepfakes emerged in 2018, enabling realistic image and video manipulation. Vision
Transformersintrod
uced a powerful
alternative to CNNs
for image
classification in 2019



2019



## Instructions for use

The 2010s marked a transformative decade for computer vision, driven by groundbreaking advancements in deep learning, powerful algorithms, and innovative applications. From the emergence of AlexNet and the revolutionary use of convolutional neural networks to the development of GANs and Vision Transformers, this period witnessed a profound shift in the capabilities and scope of computer vision technologies. Influential figures like Geoffrey Hinton, Ian Goodfellow, and Ross Girshick laid the foundation for advancements that fueled real-world applications, including autonomous vehicles, healthcare diagnostics, and augmented reality. While these technologies unlocked new possibilities, they also brought challenges, such as ethical concerns around deep-fakes and data privacy. Overall, the 2010s set the stage for a future where computer vision continues to reshape industries and redefine human-machine interaction.