

# Computer Vision Timeline

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# Computer Vision Timeline (1950's to 1970's)

IBM's magnetic data-storage systems.  
Frank Rosenblatt's Perceptron.  
(in 1956) The term "Computer Vision" is coined  
at the Dartmouth Conference.

Introduction of AGM-65 Maverick optical  
contrast seeker missiles with onboard cameras  
for targeting.  
Optical Character Recognition (OCR) debuts via  
Kurzweil Computer Products.  
Researchers like David Marr laid the groundwork  
for understanding visual perception.

1960's

1950's

1970's

Development of the complementary metal-oxide-  
semiconductor.  
MIT AI lab begins computer vision projects.  
(In 1966) Development of the first computer  
vision system, capable of recognizing objects in  
simple images.

# Computer Vision Timeline (1980's to 2000's)

Smart cameras, such as the Xerox optical mouse, and layered image processing.

Viola-Jones object detection framework (facial recognition and object detection).  
Pascal VOC Project launched for developing image datasets for training.  
(In 2001) Introduction of the Bag-of-Words model for image recognition.

1990's

1980's

2000's

The Internet and the dot-com boom.  
(In 1990) The Scale-Invariant Feature Transform (SIFT) algorithm is introduced by David Lowe, becoming a fundamental tool for object recognition.

# Computer Vision Timeline (2005 to 2012)

Security Show Japan 2005 and the first mobile phone with working facial recognition features.

2006: Geoff Hinton, Yann LeCun, and Yoshua Bengio lay the foundation for deep learning, impacting computer vision significantly.

2005

2010

AI's average object-recognition error rate becomes better than humans'; 2.5% versus 5%.

First ImageNet competition. Developers competed to develop image recognition models. ImageNet now has up to 15 million images in 20,000 categories. (In 2009) The ImageNet Large Scale Visual Recognition Challenge is initiated, sparking a surge in deep learning for image classification.

Google's X Lab's neural network starts to look for cat videos when allowed access to YouTube.

2012: AlexNet, a deep convolutional neural network, wins the ImageNet Challenge, demonstrating the power of deep learning in computer vision.

2012

# Computer Vision Timeline (2016 to 2022)

2015: Generative Adversarial Networks (GANs) are introduced, revolutionizing image generation and manipulation.

2015

2022

2023

2023

Summer 2023, SeedAi teams up with the White House to organize the largest AI red teaming event at DEF CON in Las Vegas.

November 2022, OpenAI releases Chat GPT. Showcasing the integration of computer vision and natural language processing.

October 2023, Joe Biden signs the first Executive Order on the regulation and development on A.I. Becoming the first President to do so.

# As for the influential figures:

- David Marr (1945-1980): Pioneering researcher in visual perception, laying foundations for computer vision.
- Geoff Hinton: Co-inventor of backpropagation and key contributor to the development of neural networks for computer vision.
- Yann LeCun: Creator of Convolutional Neural Networks (CNNs) and a significant figure in deep learning.
- Sam Altman: Founder and CEO of OpenAI



# Major Applications:

Applications that showed major improvements in our daily lives

- Medical Imaging: Computer vision aids in medical diagnostics through image analysis in fields like radiology.
- Autonomous Vehicles: Vision systems enable vehicles to perceive and navigate the environment.
- Facial Recognition: Used in security, unlocking devices, and various identification applications.
- Augmented Reality: Computer vision enhances AR experiences by recognizing and interacting with the real world.

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