

A 3D rendering of a warehouse conveyor belt system. Several cardboard boxes are positioned on the belt, which is flanked by blue guides. Red laser lines are projected onto the floor and the boxes, indicating a computer vision system for object detection and tracking. The scene is brightly lit, with a focus on the central path of the conveyor.

HISTORICAL TIMELINE OF COMPUTER VISION

MOHAMMAD SUFYAAN, LIONEL DELUNA, MASSON LOPEZ, MORGAN GERMANY, SILAS CAPORAL

PROFESSOR PATRICIA MCMANUS

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1956

The term "artificial intelligence" (AI) was introduced in 1956 by John McCarthy at the Dartmouth Conference, where scientists came together to discuss how machines could be designed to mimic human intelligence.

1959

In 1959, the first digital image scanner was invented, converting images into grids of numbers. This made it possible to store and manipulate images digitally.

1963

In 1963, Lawrence Roberts demonstrated that computers could identify and outline objects in images. This was an important step in computer vision, enabling machines to process visual information similarly to humans.



1971

The diagram features a horizontal timeline with three brown rounded rectangular boxes containing the years 1971, 1976, and 1977. A large, light brown arrow points from left to right behind these boxes. Below each box is a brown arrow pointing downwards to a text description. The top of the image has three horizontal bars in dark grey, brown, and grey.

In 1971, Lawrence (Larry) Roberts wrote one of the first e-mail programs.

1976

In 1976, David Marr's Vision theory used a computational approach to revolutionize the understanding of visual perception.

1977

1977 impacted computer vision with Edge Detection and laying the groundwork for more advanced developments that followed.



1981

The diagram features a horizontal timeline with three brown rounded rectangular boxes containing the years 1981, 1983, and 1986. A large, light brown arrow points from left to right behind these boxes. Below each year box is a brown arrow pointing downwards to a text description. The background has three horizontal bars at the top: a dark grey bar on the left, a brown bar in the middle, and a grey bar on the right.

The concept of optical flow, introduced by Horn and Schunck, allowed for the estimation of motion in video sequences.

1983

The first IEEE Conference on Computer Vision and Pattern Recognition (CVPR) was held, establishing a dedicated forum for the field.

1986

The introduction of Markov Random Fields (MRFs) for image modeling and texture synthesis broadened the scope of image analysis.



1991

The diagram features a horizontal timeline with three brown rounded rectangular boxes containing the years 1991, 1995, and 1999. A large, light brown arrow points from left to right behind these boxes. Below each year box is a brown arrow pointing downwards to a corresponding text block.

Eigenface, an application used for human face detection, was created at an earlier date but was first used in 1991. This was a groundbreaking moment computer vision because they could work on a small amount of data.

1995

While SVM (support vector machines), wasn't created for computer vision, it still played a major part because of its usefulness in classifications and regression analysis.

1999

David Lowe invented SIFT(scale-invariant feature transform) to solve the problem of detecting and matching features across different images, regardless of scale, viewpoint, etc. This was a revolutionary addition to the field of computer vision.

2001

The diagram features a horizontal timeline at the top with three colored segments: dark blue, brown, and grey. Below this, a light brown arrow points from left to right, passing through three brown rounded rectangular boxes containing the years 2001, 2006, and 2009. From each box, a brown arrow points downwards to a corresponding text block.

The release of the Viola-Jones face detection framework marked a significant step towards real-time vision applications.

2006

Geoffrey Hinton's research on deep belief networks rekindled interest in deep learning, impacting future computer vision models.

2009

The ImageNet project was launched, providing a large-scale dataset that would become crucial for training deep learning models in computer vision.



2012

The diagram features a horizontal timeline at the top with three colored segments: dark blue, brown, and grey. Below this, a light brown arrow points from left to right, passing through three brown rounded rectangular boxes containing the years 2012, 2015, and 2021. From each box, a brown arrow points downwards to a corresponding text block.

AlexNet, a deep convolutional neural network, won the ImageNet competition, achieving a breakthrough in image classification accuracy.

2015

Faster R-CNN was introduced, setting a new standard for object detection and paving the way for advancements in image segmentation.

2021

The ethical implications of facial recognition and surveillance technologies gained global attention, leading to increased regulation and scrutiny.

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