COMPUTER VISION

Computer vision is a field of AI that enables computers to derive meaningful information from digital images, videos, and other visual inputs and take actions based on information. Computer vision basically enables computers to see, observe and understand. Human vision is not very different from computer vision only that human vison has had more time to advance over the years as compared to computer vision. Human vision is only better because it has the power to deduce something wrong in a photo and whether an object is moving from far away.

Computer vison trains machines to do these functions but through the use of cameras, data and algorithms rather than the way the human eye uses retina and a visual cortex. Since this system can inspect thousands of processes in a minute, noticing very had to see defects or issues, it can for sure quickly surpass the human eye capabilities.

This is how it does the functions mentioned above. A sensing device captures an image. The sensing device is often just a camera but could be any type of device that captures an image for analysis. The image is the sent to an interpreting device which breaks down the image and compares it with its library of known patterns to find out if they match. Finally, a user asks for specific information about an image, and the interpreting device provides the information requested based on its analysis of the image.

Modern computer vision applications are moving away from statistical methods and are beginning to rely on deep learning. With deep learning, it runs on a neural network which allows a computer vision program to retain information from what it sees so that it gets more and more accurate the more the user decides to use it thereby improving its functionality.