Computer vision is a field of artificial intelligence that focuses on the development of algorithms and techniques that enable computers to interpret and understand visual data from the world around them. This includes both the generation of high-level, abstract concepts from visual data, as well as the low-level processing of raw pixel data to identify specific objects or features in an image.

Computer vision has a wide range of applications, including robotics, security and surveillance, industrial inspection, medical imaging, and autonomous vehicles. Some examples of the types of problems that computer vision algorithms are designed to solve include object recognition, object tracking, scene understanding, and image restoration.

One of the key challenges in computer vision is the vast amount of visual data that is generated in the world, and the need to develop efficient algorithms that can quickly and accurately process this data. Another challenge is the vast variability of visual data, including differences in lighting, pose, and viewpoint, which can make it difficult for algorithms to generalize from one situation to another.

To address these challenges, researchers in the field of computer vision have developed a range of techniques, including feature detection and extraction, deep learning, and probabilistic graphical models. These techniques are often used in combination to achieve the best performance on a given task.

Overall, the field of computer vision has made significant progress in recent years, and continues to be an active area of research and development. As the capabilities of computer vision algorithms continue to improve, they are likely to have an increasingly important role in a wide range of applications.