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Q - How is Computer Vision and AI related?

- **ARTIFICIAL INTELLIGENCE**

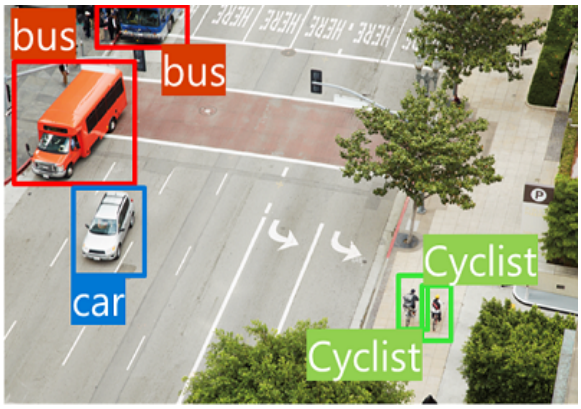
✓ **AI is the creation of software that imitates human behaviours and capabilities**
✓ **The goal of AI is to make a smart computer system like humans to solve complex problems.**
✓ **AI enables us to build amazing software that can improve health care, enable people to overcome physical disadvantages, empower smart infrastructure, create incredible entertainment experiences, and even save the planet!**

- **COMPUTER VISION**

✓ **Computer Vision is an area of AI that deals with visual processing.**
✓ **Computer vision is a field of artificial intelligence that trains computers to interpret and understand the visual world. Using digital images from cameras and videos & by using deep learning models, machines can accurately identifies the objects — and then react to what they "see."**

- Image classification
- Image classification involves training a machine learning model to classify images based on their contents. For example, in a traffic monitoring solution can use an image classification model to classify images based on the type of vehicle they contain, such as taxis, buses, cyclists, and so on.

- Object detection
- Object detection machine learning models are trained to classify multiple objects within an image, and identify their location with a bounding box. For example, a traffic monitoring solution uses object detection to identify the location of different types of vehicle



- IMAGE ANALYSIS
- You can create software that combine machine learning models with advanced image analysis techniques to extract information from images, that could helps us & provide "tags" in image or even descriptive captions that summarize the scene in the image.

- Face detection
- Face detection is a specialized form of object detection that locates human faces in an image. facial geometry analysis techniques we can extract details such as age ,facial expressions , emotions, and even recognize individuals based on their facial features.

- Optical character recognition
- Optical character recognition is a technique used to detect and read texts in images. You can use OCR to read text in photographs, or to extract information from scanned documents such as letters, invoices, or forms..