A Small Peek into Multi-Target Tracking Using Multiple Cameras

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It is important to understand how transport systems operate or how large groups of urban populations move around in cities. Nowadays, the increased demand for video surveillance systems in applications such as public security, transportation control and urban planning has garnered attention from researchers, policy makers, governments, private business, etc. These surveillance systems can facilitate the protection and security of public facilities and citizens, and can also help to transform cities to smarter, more connected and liveable cities. One important component in intelligent video surveillance is multi-camera tracking, which aims to track multiple targets, such as citizens and vehicles across multiple cameras.

The aim of this talk is to give an introduction to computer vision, a field of artificial intelligence that trains computers to interpret and understand the human visual. In particular, we will go through the process of multi-target multi-camera tracking, which includes the four steps: (1) object detection, (2) object tracking using a single camera, followed by (3) object re-identification and (4) object multi-camera tracking using multiple, connected cameras in a network.