**Technical Writing Week2 Homework** – research topic

[ Sohee Kim - 20220344 ]

My track is Energy AI, and I am interested in computer vision. Computer Vision is about a computer doing something with pictures and video that taken with a camera. It gets its name from the fact that humans and other animals perform various tasks with vision through their eyes. It is a very valuable technology both medically and military.

I came to know about the computer vision after entering Kentech, so I just know about basic knowledge. Nowadays, I was looking at seminar video presented by renowned AI researchers. Then I found interesting topic that is related to computer vision. It was about live video analytics. The name of the research was “Edge-Cloud Collaborative Systems for live video analytics”.

It introduces that live video analytics are divided into two mains. First is On-device approach. The device itself which the video is captured process video analysis. It is effective because it processes itself, but it has several challenges. Its frameworks are designed for single model execution and complex tasks are unreasonable. Also, it’s challenging to process high-resolution video in real-time.

The other is edge-cloud collaborative approach. On this way, the device pass data to the cloud, and cloud process it and pass back to the device. Cloud has far more powerful computing resources, but the key challenge is that it needs to send high amount of raw of feature data to make a inference. The processing latency benefit is quickly compromised by data transmission latency. So, this research offers two technologies of efficient way for live video analytics.

It was interesting because I haven’t thought of efficient way to analysis live video, just think of how to analysis video. The technologies that this research shows are so interesting, so I want to research more about it. I will find more research about it from seminar videos or papers.