

## CENG322 – VIDEO ASSIGNMENT 2

- 1) In computing, one can come across heterogeneous architectures, a mix of special-purpose processors such as graphics processing units (GPUs) and tensor processing units (TPUs) in addition to re-programmable hardware (FPGAs) along with conventional ones (CPUs). Moreover it promotes several goodnesses. Through precise speed assigned, the highest possible performance is achieved by using the available accelerators to do particular activities. With the fact that data are processed specifically, the energy efficient manner is being used for targeted data processing, and cost effectiveness is the advantage which gets due to the vast space of hardware equipment that is in use. Such heterogeneous and scalable systems create an ecosystem that could perform as many tasks as a workload could allow. For example, tasks such as running mobile devices I/O heavy applications, supercomputer processing of big data, or car fleet handling of autonomous vehicles in real-time and so on. Here, the ability to handle multi-layered tasks, the examples being graphics rendering, machine learning and in-real-time sensor processing, is among the vital necessities of an efficient computing infrastructure that surpasses the current technology.
- 2) We covered parallelism with it's benefits and profits when processes proceed. They provide time efficiency, but they are also costly. Because I couldn't come most of the lectures, I don't have knowledge about what we haven't discussed in lectures.
- 3) Yes, I had the motivation to watch other recommended videos. Because the interest on processing working together (parallelism) and the connections between them has been told perfectly in the given video. The mystery in making processor more parallel and faster gave me energy to watch related video. But I postponed to watch them because I am so busy at the moment because of my exams and homeworks.
- 4) I would want to ask question to the lecturer about the energy and time efficiency coming with parallelism. My question would: 'How do you see the improvements until now about Processing Units on subject efficiency in Processors. And how do you see the future of them. Has they necessarily improved until now or will there be a lot to increase efficiency with cost in Processors using parallelism and heterogeneity.'