Hello everyone, my name is Harry. Today my topic is GPU, short for Graphic Processing Unit. So firstly, I would like to build a general recognition of GPU for you. GPU is one of the most great inventions in recent years. The main power of producing AI products. The engine of image processing software. It drives modern graphic rendering to see amazing animations and movie special effects.

Then, let me do a brief introduction to help you know GPU better.

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A GPU normally contains six components – Graphic Memory Controller, Graphics and Compute Array, Display Interface, Video processing unit, Power management unit and Bus interface. GCA is the most important part of all. Nearly all of the computing tasks are operating on the GCA.

In our daily lives, we can see two types of GPU, the dedicated GPU and Integrated GPU. Normally, the dedicated GPU will have higher price, and bigger size than the integrated GPU which is made inside the CPU. The Dedicated GPU also have better performance so that they can operate more complex and enormous tasks like 3A games and Rendering engines like Hudini.

The developing history of GPU is short but interesting. From the very beginning, we only have 2D accelerating GPUs like Amiga in the 1970s because computers don’t have 3D scenes at that time. With the rapid development of rendering technology, 3D technology stepped onto the stage so we had 3D accelerating GPU like S3 in the 1990s. Now we have …… Nvidia and AMD are the main GPU producers around the world.

So there’s a problem, why is it important? Firstly Graphic processing. Powerful GPU help us see finer scenes. Secondly, GPU help people do more professional applications. Finally, building AI. Building an AI model needs lots of data and huge number of interations. Why we use GPU since the GPU has more units pipes than CPU, the advantage of quantities helps GPU do more matrix computes than CPU at the same time.