1. There are different interpretations of artificial intelligence in different contexts. Please elaborate on the artificial intelligence in your eyes.

- Artificial intelligence is the technology to prevent human thoughts and learning processes for machines, especially the computer system. This artificial intelligence is developed by humans with the purpose of automating intelligent behaviors like humans, thereby cutting down workers as humans and more accurate.

2. Artificial intelligence, machine learning and deep learning are three concepts often mentioned together. What is the relationship between them? What are the similarities and differences between the three terms?

-The easiest to distinguish artificial intelligence, learn machines, artificial neural networks and deep learning is to think about them as Russian dolls. Basically each term is a component of the term first.

- Deep study is implied in the interpretation of the neural network. The word "deep" in deep study is referring to the depth of the neural networks. A neural network consists of more than three classes-will include inputs and outputs-which can be considered a deep algorithm.

- Deep study can be understood as a set of children of machine learning. The difference is the way each algorithm and the amount of data used by each algorithm used. Studying deep automation mostly extract the features of the process, eliminating some human craft interventions. It also allows the use of large data sets. This ability will be especially interesting when we begin to explore the use of more non-structured data, especially because 80-90% of the data of an organization is estimated to be without structures.

3. After reading the artificial intelligence application scenarios in this chapter, please describe in detail a field of AI application and its scenarios in real life based on your own life experience

The Vibot-1a robot of the Military Technical Academy runs on drug and food tests at the disease rooms of Bac Thang Long Hospital in April 2020

This robot also helps doctors communicate with the isolated person without having to meet directly. The common feature of these robots is to use AI to handle unknown problems (identifying obstacles and building roads) to interact in an environment of humans, different from robots used in the public. Karma follows the predetermined problem.

4. Which chip is for deep neural networks and Ascend AI processors. Please brief these four major modules.

Qualcomm AI 100

AI chips are built from the beginning to help speed up AI experience, provide a turnover solution to solve the most important aspects of AI inference - including low power consumption, scale , the ability to lead the handling button and signal processing expertise, creating favorable conditions for the ability of data centers to run deductive in the cloud faster and more effectively.

Apple Bionic A13

Apple Bionic A13 processor in iPhone 11, 11 Pro and 11 Pro Max helps increase Apple's new iPhone performance by at least 20% and a 30% reduction in power consumption compared to the previous generation. Apple Bionic A13 is manufactured on the N7P process of TSMC. It is integrated with 8.5 billion semiconductor balls and has two Lightning cores at 2.65 GHz and four high -performance corporate core at 1.8 GHz. Besides these 6 cores, it also contains quad -core GPUs and eight -core neurotransmitter for hardware accelerations for machine learning chips to help chip matrix faster than six times. Apple Bionic A13 has two integrated machine accelerations that can handle one trillion calculations per second.

Google TPU

TPU resources accelerate the linear algebraic calculation efficiency, which is used on machine applications. The TPU minimizes accuracy time when training large and complex nerve network models that can converge for a few hours on TPU instead of weekly on other hardware platforms.

14 nm Stratix 10 FPGA of Intel

According to Microsoft, the FPGA configuration has achieved more than a level of improvement in latency and ventilation on RNN (recurrent nerve network) for Bing without having to be in batches. The operating costs and the complexity of the software are significantly improved thanks to the process of AI processing in real time and extremely low latency without mass processing. Microsoft Project Brainwave has also been applied in the cloud with Azure Machine Learning and boundary with Azure DataBox Edge.