# Research Topic Summary

Speaker Name: Pieter Abbeel
Talk Title: Learning to Learn

Your Name: Bojun Yang

**Research Field/Problem:**
Describe one (or more) of the research problems the speaker's work addresses.
Robots have the electrical and mechanical capability to do tasks that humans can do. The problem is the artificial intelligence.
Artificial intelligence can surpass humans. The problem is that it takes a long time to train.

**Approach:**
What is/are the novel approach(es) or innovative idea(s) behind the speaker's solution to the above?
Key enablers for AI: Data, Compute, Human Ingenuity.
We have exponential growth in data and compute so we want to leverage these two areas to make progress in the research space.
Fast reinforcement learning: let algorithm learn a lot of meta environments to learn the essence of how the world works. From facing many environments at meta-training time, the algorithm can extract a fast reinforcement learning agent that can learn very quickly in a new environment by re-using what it has learned in the meta-training environments.
Simulation is also very helpful for generating data to train on.

**Takeaways:**
What key ideas or new insights did you learn from this talk?
Taking advantage of data and compute, we can now generate systems or algorithms that can beat or match humans. There are different approaches that I've had experience in before but the lifelong learning example was interesting. I would be interested in learning how to train an agent to be good at adapting.

**Questions:**
List any follow-up questions you have after watching this video.
What core concepts go into creating an agent that is good at adaptation? Most trained algorithms learn to do a specific thing really well.