Meta-Learning Symposium

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Definition

The framework of using one learning system to modify or optimize certain aspects of another learning system.
The importance of meta-learning

- Machine Learning systems become increasingly complex:
  - Many hyperparameters,
  - Special design & architecture components

- How can the complexity, i.e. the design, components, and hyperparameters, be configured automatically so that these systems perform as well as possible?
The importance of meta-learning

GoogleNet architecture
The importance of meta-learning

Google NMT Architecture
Key approaches in recent years

- Evolutionary Optimization
- Bayesian Optimization
- Gradient Descent
- Reinforcement Learning
Our schedule

- 2.10 - 3.10  Topic 1: Evolutionary Optimization
- 3.10 - 3.50  Topic 2: Bayesian Optimization
- 4.00 - 4.30  Coffee Break
- 4.30 - 5.50  Topic 3: Gradient Descent
- 5.50 - 6.30  Topic 4: Reinforcement Learning
- 6.30 - 7.30  Dinner Break
- 7.30 - 8.10  Topic 4: Reinforcement Learning
- 8.10 - 9.30  Panel Discussion