

<Advanced Deep Learning>

Description

Deep learning is a branch of machine learning based on a set of algorithms that attempt to model high level abstractions in data. Deep learning is a driving force of the recent advances in AI.

In this course, we study advanced techniques of deep learning to analyze large amount of data. Topics include linear factor models, autoencoders, representation learning, structured probabilistic models for deep learning, monte carlo methods, partition function, approximate inference, and deep generative models.

Instructor

Prof. U Kang, Department of Computer Science and Engineering, Seoul National University

Topics to be covered

- Deep Feedforward Networks
- Linear Factor Model
- Autoencoders
- Representation Learning
- Structured Probabilistic Model for Deep Learning
- Monte Carlo Methods
- Confronting the Partition Function
- Approximate Inference
- Deep Generative Models

Textbook

Deep Learning by Ian Goodfellow, Yoshua Bengio, and Aaron Courville