Deep Learning

Dashboard

Deep learning is a branch of machine learning based on a set of algorithms that attempt to model high level abstractions in data.

Get Started

- Marius Dinu: Introduction to Image Classification and Neural Networks (Chapter 3 - Classification)
- Michael Nielsen: Neural Networks and Deep Learning
- Udacity: Deep Learning Course
- Stanford: Convolutional Neural Networks for Visual Recognition
- Facebook AI Research: Image Classification with Deep Learning

Frameworks

- **CNTK**
- **Tensorflow**
- **Keras**
- **Torch**
- **Theano**
- **DL4J**

Unsupervised Learning

- Sparse Autoencoder
- Unsupervised Representation Learning with Deep Convolutional Generative Adversarial Networks
- Generative Models
- Improved Techniques for training GANs
- Tutorial on Variational Autoencoders
- Unsupervised Representation Learning with Deep Convolutional Generative Adversarial Networks

Related Topics

- Visual Information Theory
- Calculus on Computational Graphs: Backpropagation
- An overview of gradient descent optimization algorithms
- Dropout: A Simple Way to Prevent Neural Networks from Overfitting
- Stanford: Machine Learning Course CS229 on YouTube
- Stanford: Unsupervised Feature Learning and Deep Learning
- Bay Area Deep Learning
- Deep Visual-Semantic Alignments for Generating Image Descriptions

- Distributed Representations of Words and Phrases and their Compositionality
- Stanford: Deep Learning for Neural Language Processing
- Dynamic Memory Networks for Visual and Textual Question Answering