ML YouTube Courses

At dair.ai we ❤ open education. We are excited to share some of the best and most recent machine learning courses available on YouTube.

Course List:

Stanford CS229: Machine Learning

To learn some of the basics of ML:

• Linear Regression and Gradient Descent • Logistic Regression • Naive Bayes • SVMs • Kernels • Decision Trees • Introduction to Neural Networks • Debugging ML Models ...

 Link to Course

Applied Machine Learning

To learn some of the most widely used techniques in ML:

• Optimization and Calculus • Overfitting and Underfitting • Regularization • Monte Carlo Estimation • Maximum Likelihood Learning • Nearest Neighbours ...

 Link to Course

Machine Learning with Graphs (Stanford)

To learn some of the latest graph techniques in machine learning:

• PageRank • Matrix Factorizing • Node Embeddings • Graph Neural Networks • Knowledge Graphs • Deep Generative Models for Graphs ...

 Link to Course

Probabilistic Machine Learning

To learn the probabilistic paradigm of ML:

• Reasoning about uncertainty • Continuous Variables • Sampling • Markov Chain Monte Carlo • Gaussian Distributions • Graphical Models • Tuning Inference Algorithms ...

 Link to Course

Introduction to Deep Learning

To learn some of the fundamentals of deep learning:

• Introduction to Deep Learning

 Link to Course

Deep Learning: CS 182

To learn some of the widely used techniques in deep learning:

• Machine Learning Basics • Error Analysis • Optimization • Backpropagation • Initialization • Batch Normalization • Style transfer • Imitation Learning ...

 Link to Course

Deep Unsupervised Learning

To learn the latest and most widely used techniques in deep unsupervised learning:

• Autoregressive Models • Flow Models • Latent Variable Models • Self-supervised learning • Implicit Models • Compression ...

 Link to Course

NYU Deep Learning SP21

To learn some of the advanced techniques in deep learning:

• Neural Nets: rotation and squashing • Latent Variable Energy Based Models • Unsupervised Learning • Generative Adversarial Networks • Autoencoders ...

 Link to Course

CMU Neural Networks for NLP

To learn the latest neural network based techniques for NLP: • Language Modeling • Efficiency tricks • Conditioned Generation • Structured Prediction • Model Interpretation • Advanced Search Algorithms ...

 Link to Course

Multilingual NLP

To learn the latest concepts for doing multilingual NLP:

• Typology • Words, Part of Speech, and Morphology • Advanced Text Classification • Machine Translation • Data Augmentation for MT • Low Resource ASR • Active Learning ...

 Link to Course

Advanced NLP

To learn advanced concepts in NLP:

• Attention Mechanisms • Transformers • BERT • Question Answering • Model Distillation • Vision + Language • Ethics in NLP • Commonsense Reasoning ...

 Link to Course

Deep Learning for Computer Vision

To learn some of the fundamental concepts in CV:

• Introduction to deep learning for CV • Image Classification • Convolutional Networks • Attention Networks • Detection and Segmentation • Generative Models ...

 Link to Course

AMMI Geometric Deep Learning Course (2021)

To learn about concepts in geometric deep learning:

• Learning in High Dimensions • Geometric Priors • Grids • Manifolds and Meshes • Sequences and Time Warping ...

 Link to Course

Deep Reinforcement Learning

To learn the latest concepts in deep RL:

• Intro to RL • RL algorithms • Real-world sequential decision making • Supervised learning of behaviors • Deep imitation learning • Cost functions and reward functions ...

 Link to Course

Full Stack Deep Learning

To learn full-stack production deep learning:

• ML Projects • Infrastructure and Tooling • Experiment Managing • Troubleshooting DNNs • Data Management • Data Labeling • Monitoring ML Models • Web deployment ...

 Link to Course

What's Next?

There are many plans to keep improving this collection. For instance, I will be sharing notes and better organizing individual lectures in a way that provides a bit of guidance for those that are getting started with machine learning.

If you are interested to contribute, feel free to open a PR with links to all individual lectures for each course. It will take a bit of time, but I have plans to do many things with these individual lectures. We can summarize the lectures, include notes, provide additional reading material, include difficulty of content, etc.