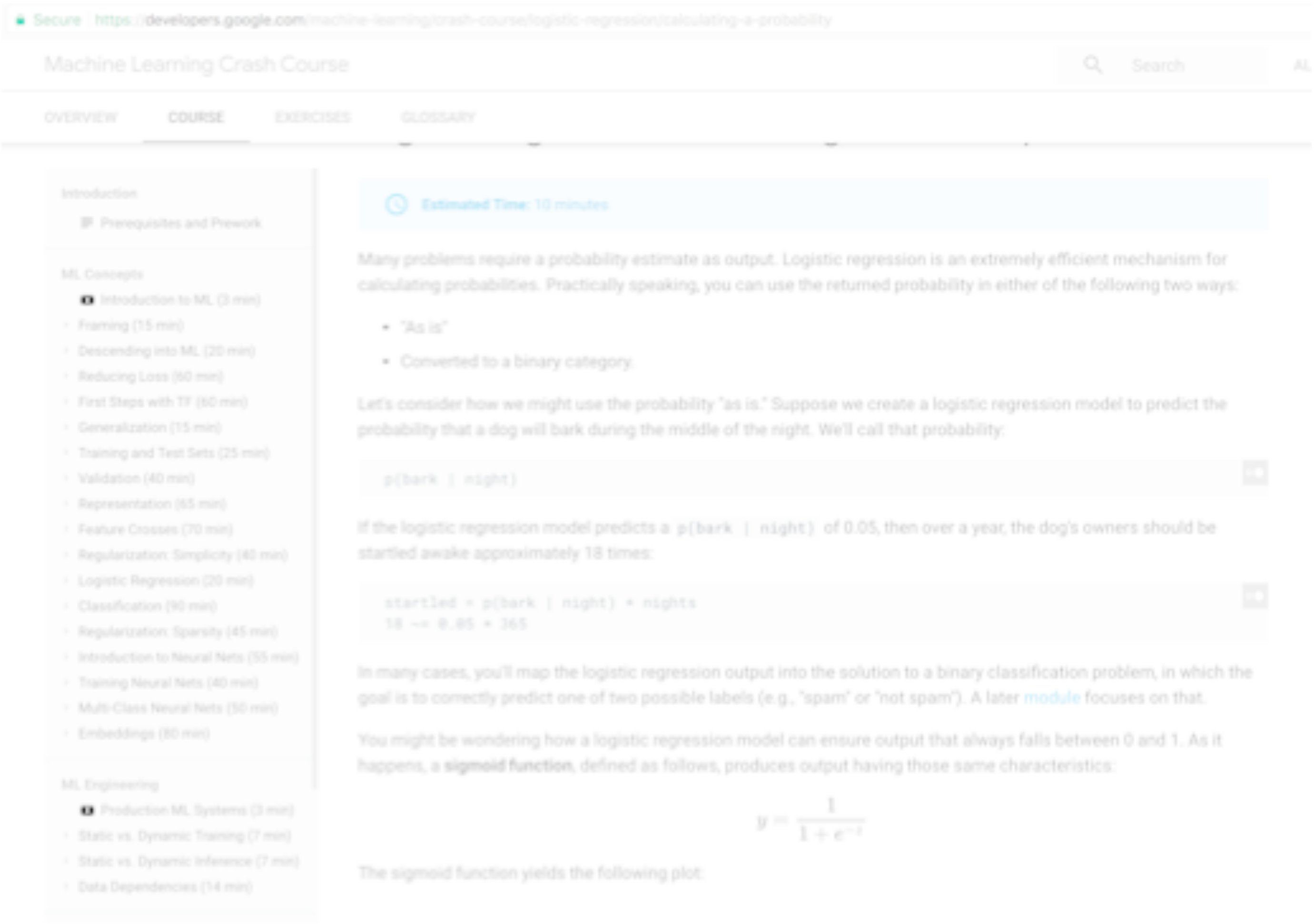
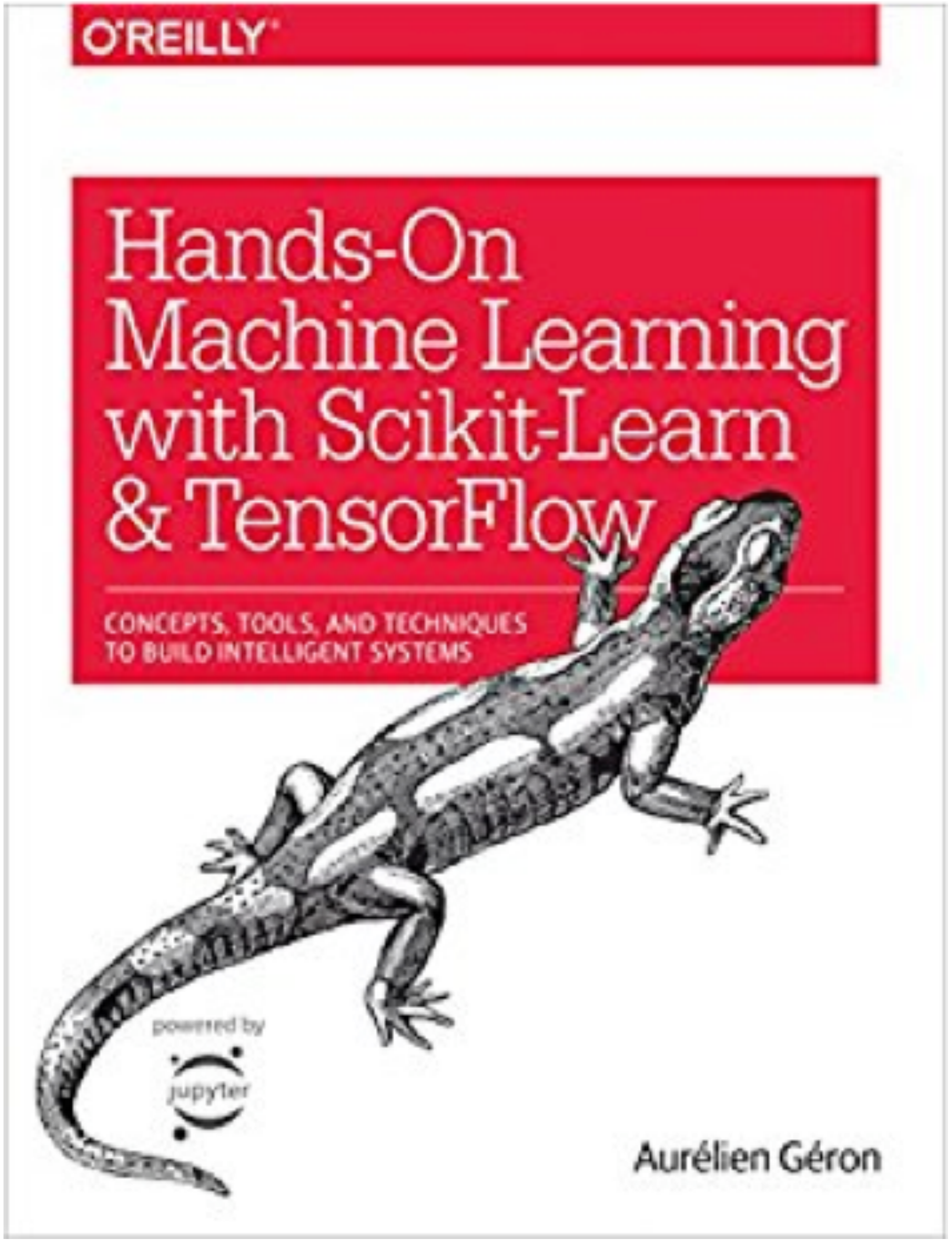
Machine Learning

Resources and References

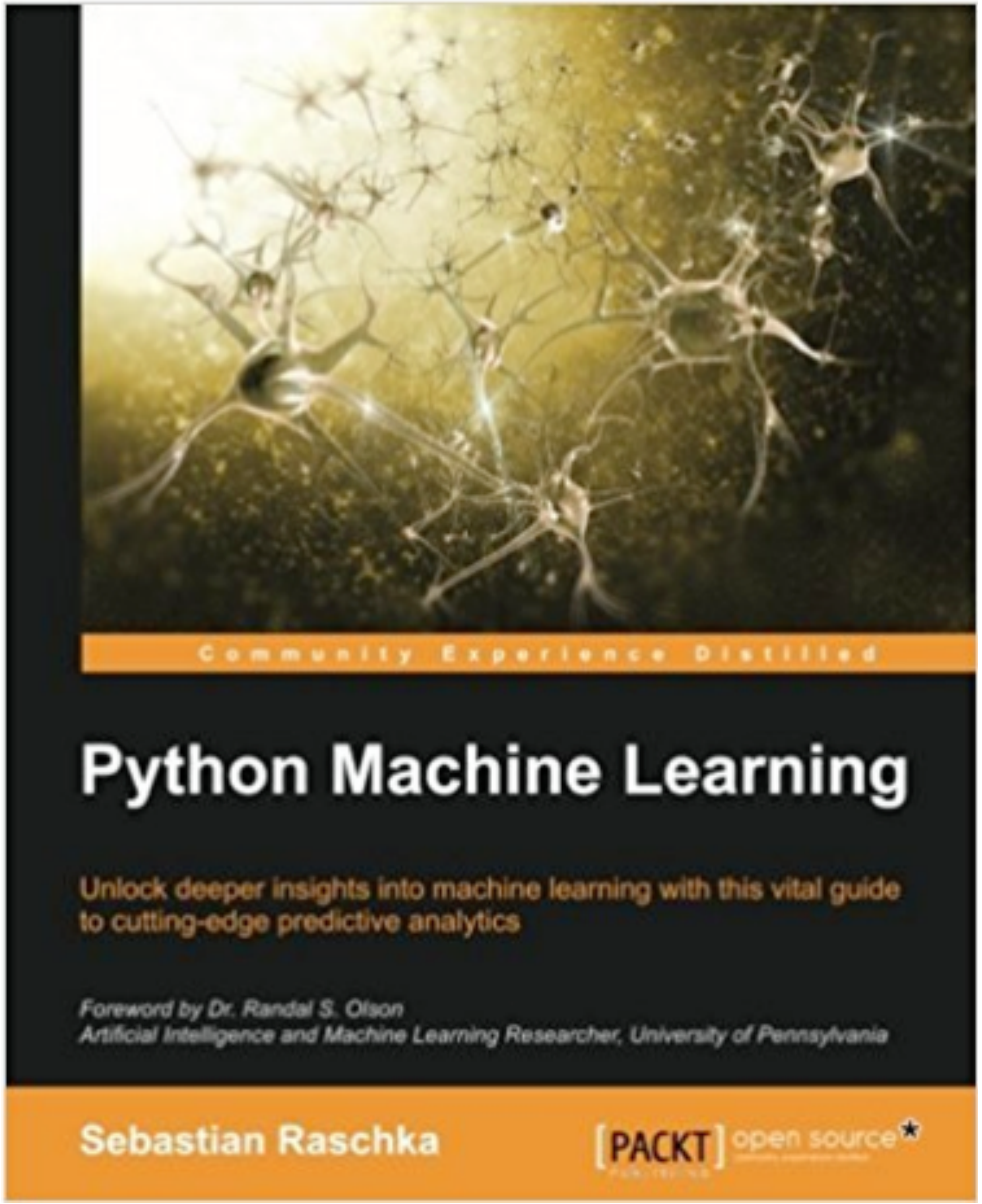
Machine learning crash course (self paced) (MLCC)



Hands-On Machine Learning with Scikit-Learn and TensorFlow: Concepts, Tools, and Techniques to Build Intelligent Systems
- Aurélien Géron

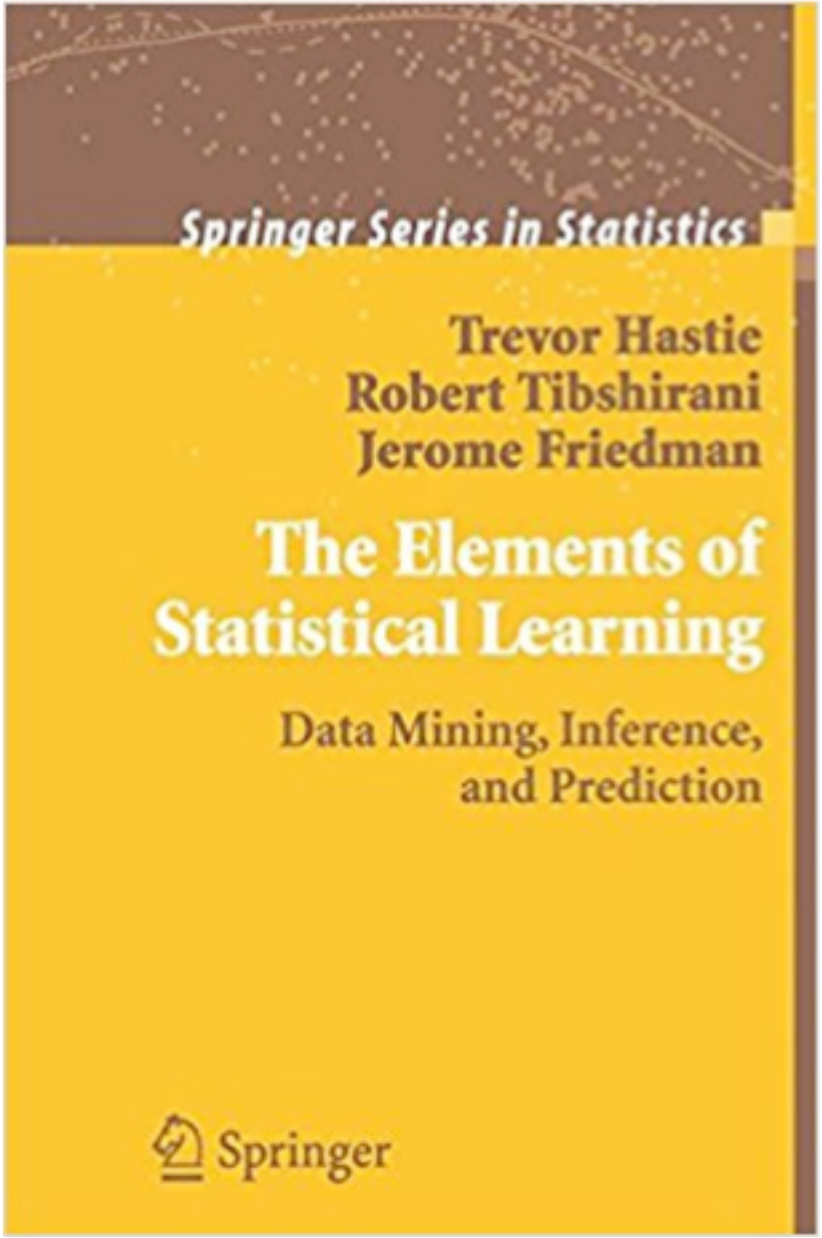


Python Machine Learning - Sebastian Roschka



Deep Learning (Adaptive Computation and Machine Learning series) - Ian Goodfellow

The Elements of Statistical Learning: Data Mining, Inference, and Prediction - Trevor Hastie



OpenIntro Statistics

Machine Learning (MOOC) - Andrew Ng (coursera.org)

Machine Learning
Stanford University

Deep Learning (MOOC)- Andrew Ng (coursera.org)

Deep Learning
deeplearning.ai

Class notes from Machine Learning - Andrew Ng

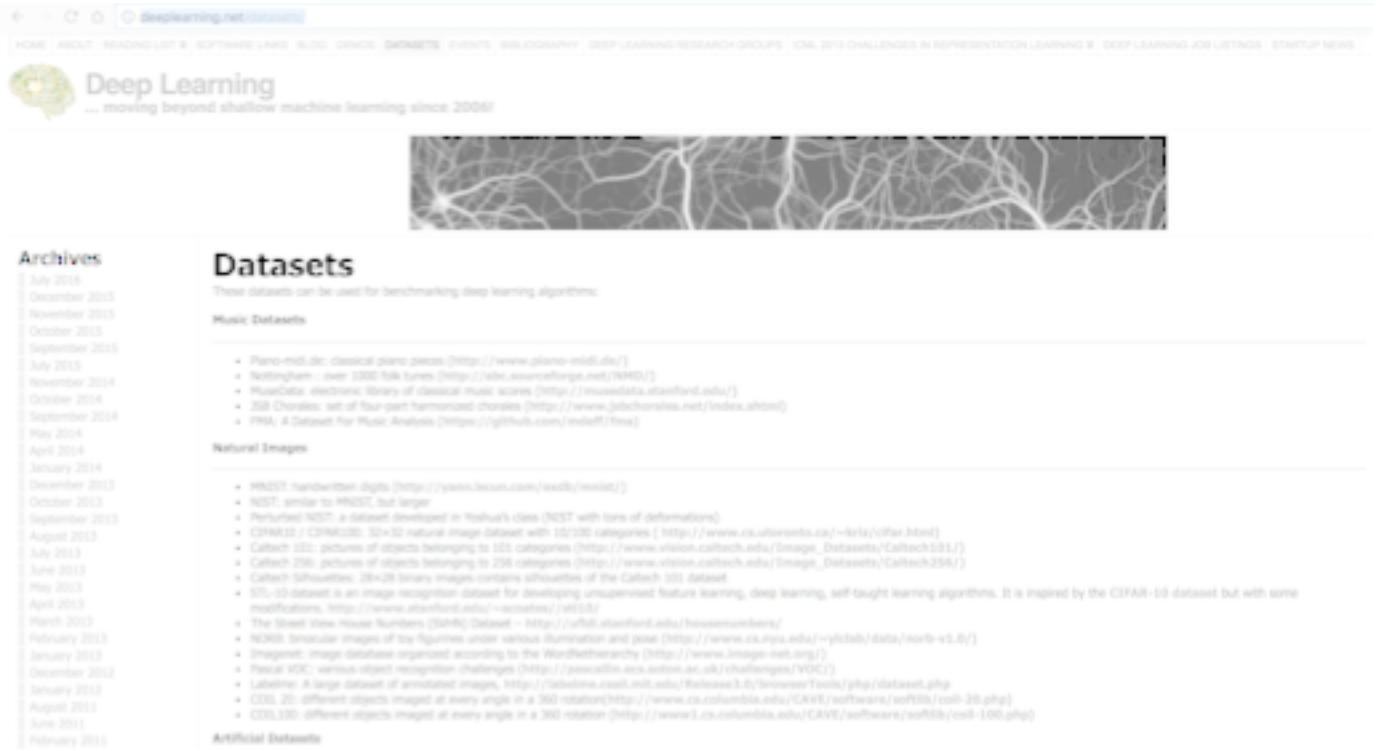
https://1drv.ms/f/s!AqPMqweMPzEegpsyjwSffQygj_En8w

CS231n: Convolutional Neural Networks for Visual Recognition Stanford

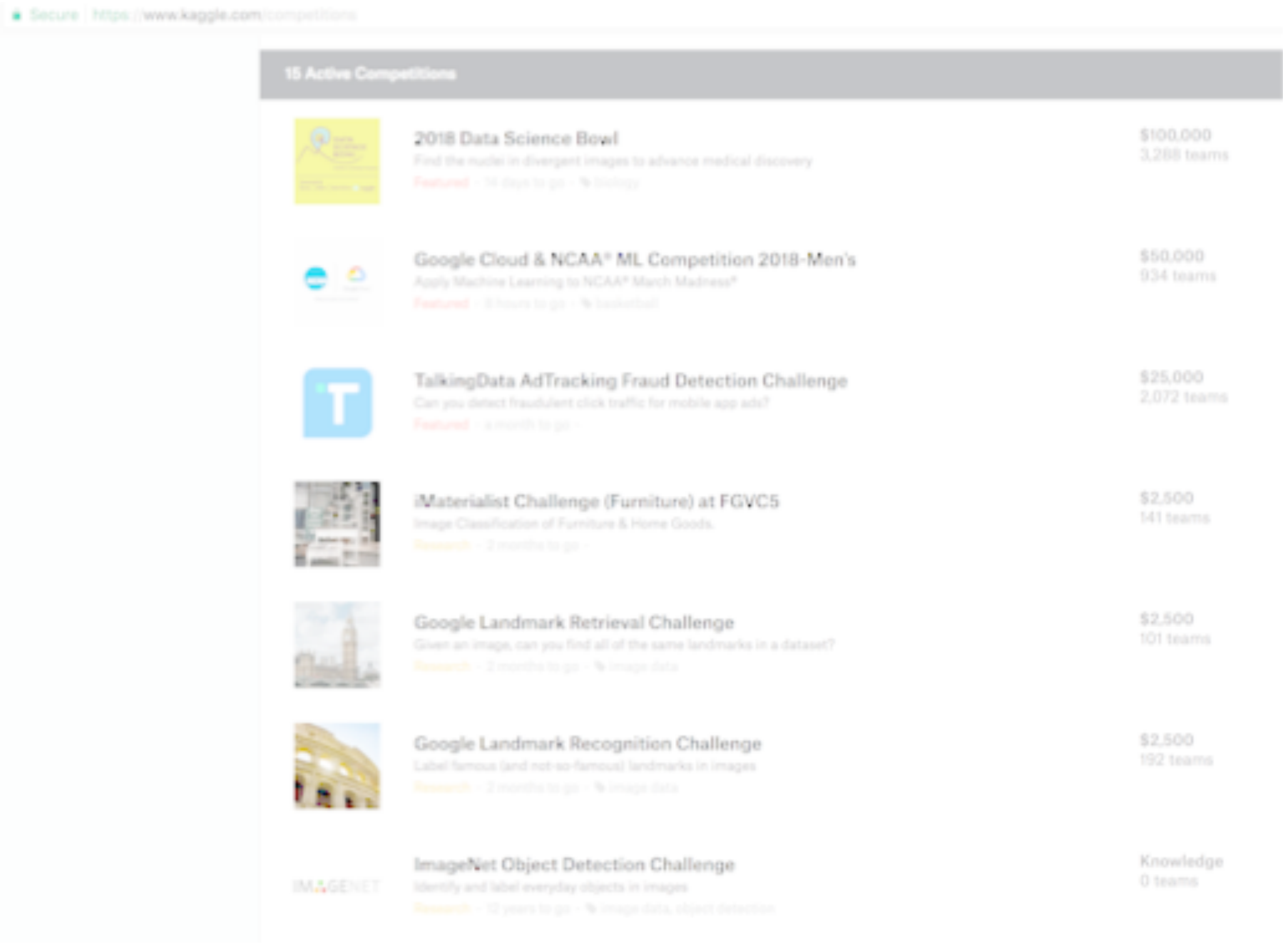
- http://cs231n.github.io/
- https://www.youtube.com/playlist?list=PL3FW7Lu3i5JvHM8ljYj-zLfQRF3EO8sYv

Dataset for Deep Learning

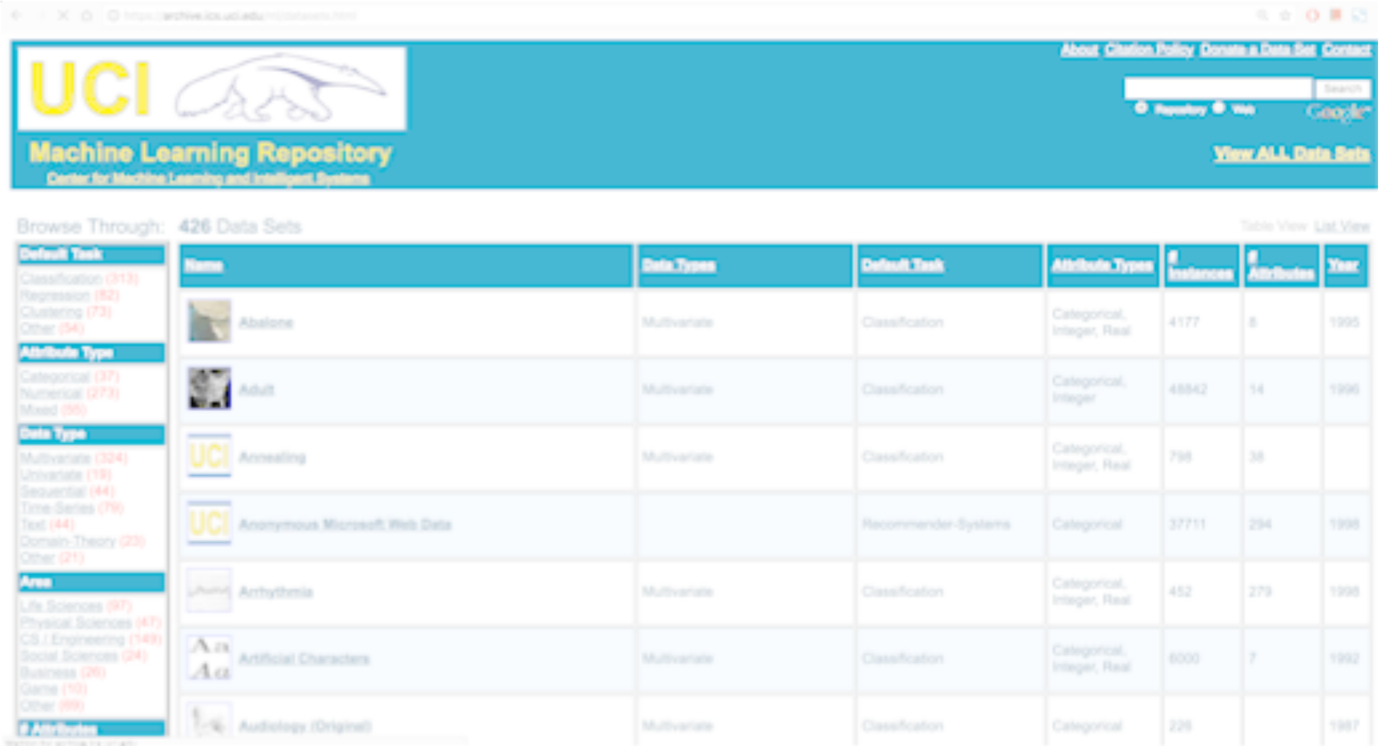
http://deeplearning.net/datasets/



Kaggle machine learning competition Kaggle.com



UCI machine learning repo for datasets



Blogs of AI, ML

- https://machinelearningmastery.com/blog/
- https://blog.algorithmia.com/
- https://aitopics.org/search
- https://machinelearnings.co/
- https://chatbotsmagazine.com/
- https://chatbotslife.com/
- http://www.33rdsquare.com/
- https://openai.com/blog
- https://intelligence.org/blog/
- https://www.reddit.com/r/artificial/
- https://aitopics.org/search
- https://machinelearnings.co/
- https://www.artificial-intelligence.blog/

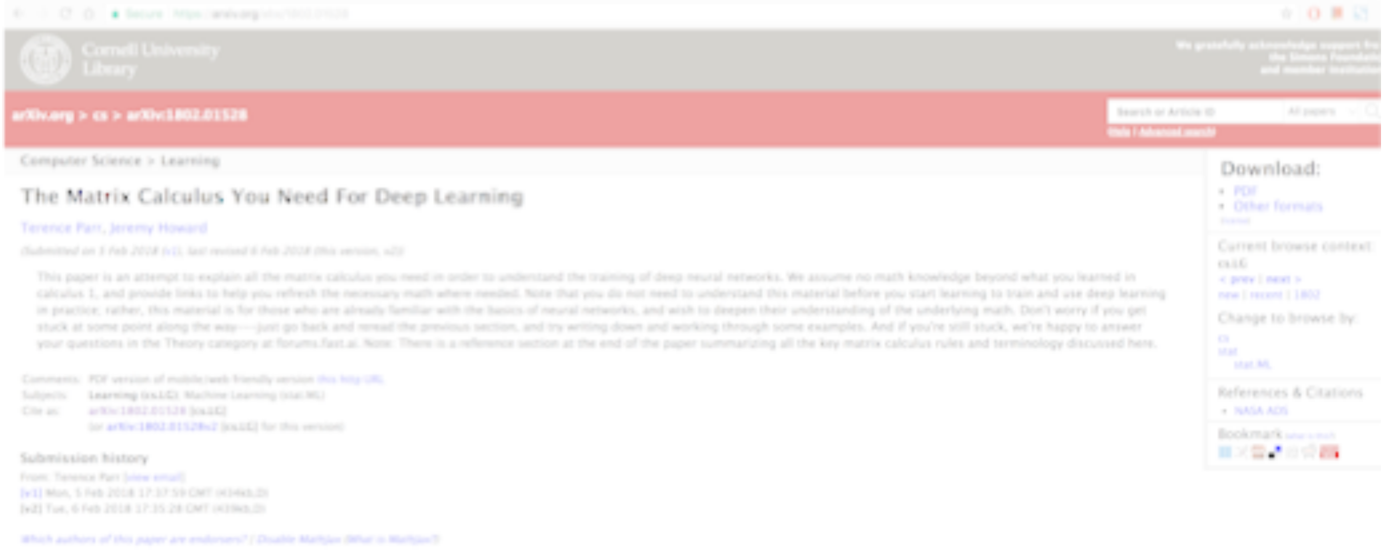
- Allen Institute for Artificial Intelligence
- https://www.reddit.com/r/singularity/
- http://research.baidu.com/
- https://www.artificiallawyer.com/
- http://www.expertsystem.com/blog/
- *https://aws.amazon.com/blogs/ai*
- https://medium.com/ai-roadmap-institute
- https://deepmind.com/blog/
- https://www.inbenta.com/en/blog/
- https://blog.clarifai.com/
- https://www.datarobot.com/blog/
- https://medium.com/archieai
- https://www.singularityweblog.com/blog/
- https://iris.ai/blog/
- https://blogs.nvidia.com/

More References

- Machine Learning Lecture Notes from MIT
- Challenges in Machine Learning and Data Mining
- Introduction to Statistical Learning
- Machine Learning Slides from Edx
- Matrix Cookbook
- Deep Learning Book
- Michael Nielsen's tutorials
- Convolutional Neural Network for Visual Recognition

- Basic Derivative Formula
- Oxford University Deep learning Course Material
- Deep Learning Mind Map
- MIT Course - Deep Learning for Self Driving Car
- CS231n: Convolutional Neural Networks for Visual Recognition
- Artificial Intelligence - A modern approach
- Mathematical Summary
- Kernel functions in machine learning
- Introduction to linear algebra
- Jupyter Notebook Tips
- Parallel Algorithms

Research papers



Articles on deep learning

- Understanding Neural Network: A beginner's guide
- Artificial Neural Network (ANN) in Machine Learning
- 30 Free Courses: Neural Networks, Machine Learning, Algorithms, AI
- Building Convolutional Neural Networks with Tensorflow
- A simple neural network with Python and Keras +
- Implementing a Neural Network from Scratch in Python
- Neural Networks: Crash Course On Multi-Layer Perceptron
- Understanding Neural Networks with TensorFlow Playground
- Making data science accessible – Neural Networks
- Must Know Tips/Tricks in Deep Neural Networks
- An Introduction to Implementing Neural Networks using TensorFlow
- Yet another introduction to Neural Networks
- Matrix Multiplication in Neural Networks
- Neural Networks: The Backpropagation algorithm in a picture
- Accelerating Convolutional Neural Networks on Raspberry Pi
- The Unreasonable Effectiveness of Recurrent Neural Networks
- Book: Neural Networks and Statistical Learning
- Neural Networks as a Corporation Chain of Command
- Recurrent neural networks, Time series data and IoT
- Predicting Car Prices Using Neural Network
- Beyond Deep Learning – 3rd Generation Neural Nets
- Use Neural Networks to Find the Best Words to Title Your eBook

Image Dataset for object detection

Dataset	Description
https://github.com/openimages/dataset	Open Images is a dataset of ~9 million URLs to images that have been annotated with image-level labels and bounding boxes spanning thousands of classes
http://cocodataset.org/#home	Image segmentation on household items
https://hci.iwr.uni-heidelberg.de/node/6132	Dataset image segmentation on traffic lights
http://www.cvlibs.net/datasets/kitti/	Computer vision for autonomous car
https://cs.stanford.edu/~roozbeh/pascal-context/	Semantic segmentation task by providing annotations for the whole scene
http://host.robots.ox.ac.uk/pascal/VOC/index.html	Object class recognition. Images are originally form flickr.

Computer Vision Reading Group

www.cs.ubc.ca/nest/lci/cvrg/

Computer Vision Reading Group

To **subscribe** to the mailing list for talk announcements, send a message to majordomo@cs.ubc.ca with the words `subscribe cvrg-l` in the body.

A list of upcoming papers can be found below. To be added to the schedule contact **Bicheng Xu** (bichengx@cs.ubc.ca).

Upcoming presentations

Date	Presenter	Paper or topic

Finished presentations, 2018

Date	Presenter	Paper or topic
Apr. 6	Candice	What have we learned from deep representations for action recognition? [link]
Mar. 23	Gursimran	A Simple Neural Network Module for Relational Reasoning [link]
Mar. 2	Polina	Inferring Semantic Layout for Hierarchical Text-to-Image Synthesis [link]
Feb. 16	Suhail	AttnGAN [link] Generative Adversarial Text to Image Synthesis [link]
Feb. 9	Borna	Mask R-CNN [link]
Feb. 2	Bicheng	Teaching Machines to Describe Images via Natural Language Feedback [link]
Jan. 26	Alireza	Is it hard to say I don't know?
Jan. 19	Bo Zhao	Inferring and Executing Programs for Visual Reasoning [link]

http://www.cs.ubc.ca/nest/lci/cvrg/