Textbooks and other resources

Fraida Fund

Machine Learning Concepts and Theory

- The Elements of Statistical Learning, (Hastie, Friedman, and Tibshirani), 2013. NYU Library
- An Introduction to Statistical Learning, (James, Witten, Hastie, and Tibshirani), 2013. NYU Library
- Pattern Recognition and Machine Learning, (Bishop), 2006. PDF
- Machine Learning: A Probabilistic Perspective, (Murphy). PDF
- Understanding Machine Learning: From Theory to Algorithms, (Shalev-Shwartz, Ben-David), 2014. Website, Download

Python and Programming for Machine Learning

- Python Data Science Handbook, (VanderPlas), 2016. Github
- Hands-on Machine Learning with Scikit-Learn, Keras, and TensorFlow (Géron), 2019. NYU Library 1, NYU Library 2, Notebooks on Github
- Python Machine Learning, (Raschka, Mirjalili), 2017. NYU Library, Notebooks on Github

Background (Linear Algebra, Optimization, Probability and Statistics)

Linear Algebra

- Introduction to Applied Linear Algebra, (Boyd, Vandenberghe). PDF
- Summary notes on Linear Algebra (Stanford). PDF

Optimization

- Convex Opimization, (Boyd, Vandenberghe). PDF
- Summary notes on Convex Optimization (NYU CDS). PDF

Probability and Statistics

- Probability and Statistics for Data Science notes (Carlos Fernandez-Granda, NYU CDS). PDF
- Summary notes on Probability (Stanford). PDF

Beyond Intro Machine Learning

- AI for Good Seminar Series. YouTube Playlist
- NYU CDS DS-GA 1008: Deep Learning. Course Site
- Textbook: Deep Learning, (Goodfellow, Bengio, Courville). Website
- Stanford CS231N: Convolutional Neural Networks for Visual Recognition. Course Notes, YouTube
- Stanford CS224N: Natural Language Processing with Deep Learning. Course Site, YouTube Playlist
- Harvard CS229br: Advanced Topics in Theory of Machine Learning (Boaz Barak). Course Site
- UCL (David Silver) Reinforcement Learning. Course Site, YouTube
- Textbook: Reinforcement Learning (Sutton, Barto). Website, PDF