Textbooks and other resources

Fraida Fund

Machine Learning Concepts and Theory

- The Elements of Statistical Learning, 2nd edition (Hastie, Friedman, and Tibshirani), 2019. PDF
- An Introduction to Statistical Learning with Applications in Python, (James, Witten, Hastie, Tibshirani, and Taylor), 2023. PDF
- 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
- Reinforcement Learning (Sutton, Barto). Website, PDF

Python and Programming for Machine Learning

- Hands-on Machine Learning with Scikit-Learn and Pytorch (Géron), 2025. NYU Library, Notebooks on Github
- Machine Learning with PyTorch and Scikit-Learn (Raschka, Liu, Mirjalili), 2022. NYU Library, Notebooks on Github

Background/Prerequisites

- Introduction to Applied Linear Algebra, (Boyd, Vandenberghe). PDF
- Summary notes on Linear Algebra (Stanford). PDF
- Convex Opimization, (Boyd, Vandenberghe). PDF
- Summary notes on Convex Optimization (NYU CDS). PDF
- Probability and Statistics for Data Science notes (Carlos Fernandez-Granda, NYU CDS). PDF
- Summary notes on Probability (Stanford). PDF