

Deep Learning

Comprehensive Exam Syllabus

August 26, 2019

Reference:

Deep Learning, Ian Goodfellow, Yoshua Bengio, and Aaron Courville, MIT Press, 2016.

Online link: www.deeplearningbook.org

Syllabus and Topics:

Chapters 2 through 6 and 8 through 10 of the above textbook.

- Linear Algebra (Chpt 2)
- Probability and Information Theory (Chpt 3)
- Numerical Computation (Chpt 4)
- Machine Learning Basics (Chpt 5)
- Deep Feedforward Networks (Chpt 6)
- Optimization for Training Deep Models (Chpt 8)
- Convolutional Networks (Chpt 9)
- Sequence Modeling: Recurrent and Recursive Nets (Chpt 10)

Relevant course background:

CSCE 588, Neural Networks and a recent CSCE 598 on Deep Learning.