

Readings

Optional Readings: These are *optional* resources to support student learning.

Week 1: Introduction and MapReduce

- [MMDS Ch.1: Data Mining](#) ➞
- [MMDS Ch. 2: MapReduce and the New Software Stack](#) ➞

Week 2 & Week 3:

- [MMDS Ch. 6: Frequent Itemsets](#) ➞
- Neural Networks and Embeddings:
 - [SLP Ch. 6: Vector Semantics and Embeddings](#) ➞
 - [SLP3 Ch. 7:Neural Networks](#) ➞
 - [MMDS Ch. 13: Neural Nets and Deep Learning](#) ➞

Week 4:

- [Lecture notes on decision trees by Alice Gao](#) ➞

Week 5 & Week 6:

- [MMDS Ch. 3: Finding Similar Items](#) ➞

Week 8:

- [MMDS Ch. 7: Clustering](#) ➞
- [MMDS Ch. 11: Dimensionality Reduction](#) ➞

Week 9: Reading Week

Week 10-11:

- [MMDS Ch. 5: Link Analysis](#) ➞

Week 12: Latent-Factor Recommender Systems:

- [MMDS Ch. 9: Recommendation Systems](#) ➞
- [Paper: Neural Collaborative Filtering](#) ➞
- [Paper: AutoRec: Autoencoders Meet Collaborative Filtering](#) ➞

Week 13 (Neural) Language Models:

- [SLP Ch. 3: N-gram Language Models](#) ➞
- [SLP Ch. 8: RNNs and LSTMs](#) ➞

Textbooks:

- MMDS: [Mining of Massive Datasets, Jure Leskovec, Anand Rajaraman, Jeff Ullman](#) ➞
- SLP3: [Speech and Language Processing \(3rd ed. draft\): Dan Jurafsky, James H. Martin](#) ➞