SoC-QML'22
ML Learning Material

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1. Chapters 1-5 of the `deep learning` book.
2. Linear & Logistic Regression
   - Refer to the first and second chapters of `these` notes.
   - If needed, there are these small playlists `here` and `here` on linear and logistic regression respectively.
3. Clustering
   - Basic Reading: Chapter 10 of `these` notes.
   - (A bit) Advanced Reading: Refer to the `Clustering` chapter in the book (up until spectral clustering) `Understanding Machine Learning: From Theory to Algorithms` By Shai Shalev-Shwartz and Shai Ben-David.
   - Can also see these videos 13.1-13.5 in `this` playlist.
4. Kernel Methods and SVMs
   - Basic Reading: Chapters 5 and 6 of `these` notes.
   - (A bit) Advanced Reading: Refer to the chapters 15 and 16 in the book (ignore definitions unknown to you like sample complexity etc.). `Understanding Machine Learning: From Theory to Algorithms` By Shai Shalev-Shwartz and Shai Ben-David.
   - A nice lecture is `here`.
   - Some easier to follow lectures are `here`.
5. Neural Networks
   - Main reading: `Neural Networks and Deep Learning` by Michael Nielson.
   - Additional Reading: Chapter 7 of `these` notes.
   - Additionally additional reading: Refer to the chapter 20 in the book `Understanding Machine Learning: From Theory to Algorithms` By Shai Shalev-Shwartz and Shai Ben-David.
   - Can watch 8.1 - 9.8 of `these` lectures.