

Let's Begin to Study

October 2024

- **Be self-motivated, and communicate progress every 1-2 weeks**
- **Read textbooks**
 - Optimization: Modeling, Algorithm and Theory [\[Book\]](#) [\[Video\]](#)
 - Neural Networks and Deep Learning [\[Book\]](#) [\[Video\]](#)
- **Read papers**
 - Model-Based Deep Learning, Foundations and Trends in Signal Processing [\[Paper\]](#)
 - Physics-Inspired Compressive Sensing: Beyond Deep Unrolling [\[Paper\]](#)
 - Image Denoising: The Deep Learning Revolution and Beyond [\[Paper\]](#)
 - Optimization Methods for Large-Scale Machine Learning [\[Paper\]](#)
 - Learning to Optimize: A Primer and A Benchmark [\[Paper\]](#)
 - Learning Fast Approximations of Sparse Coding [\[Paper\]](#)
- **Try to write a short draft (may be just 1 page)**
- **Track the latest literature, for example**
 - IEEE Transactions on Pattern Analysis and Machine Intelligence [\[Link\]](#)
 - Journal of Machine Learning Research [\[Link\]](#)
 - SIAM Journal on Optimization [\[Link\]](#)
 - Mathematical Programming [\[Link\]](#)
 - NIPS [\[Link\]](#)
 - ICML [\[Link\]](#)
- **Revise the manuscript, usually lengthy and tedious**
- **Finish paper submission, complete patents or software copyrights**
- **Think more, perhaps make greater discoveries**
 - How to propose better theories
 - How to develop faster algorithms
 - How to achieve more stable performance
- **Good luck and have a wonderful study**

Enjoy with me to explore data-driven optimization!