**TODO List**

1. Have a **quick look** at the paper *Matrix Factorization Techniques for Recommender Systems.* This paper won the Netflix prize and discusses state-of-the-art **non-deep learning** approaches.
2. **Read** papers listed under **Deep Network Architectures.**
3. **Propose additional architectures (i.e. find more papers)** to solve the *collaborative filtering* problem using deep learning. **Use papers cited in the Survey paper.**
4. **Propose additional datasets** (probably Pinterest is also a good idea).

**Matrix Factorization Methods**

1. Probabilistic Matrix Factorization.
2. Matrix Factorization Techniques for Recommender Systems.
3. Collaborative Filtering with Temporal Dynamics.
4. Surprise python library: <http://surpriselib.com/>

**Survey Paper**

* Deep Learning based Recommender System: A Survey and New Perspectives.

**Deep Network Architectures**

1. Neural Collaborative Filtering.
   1. *Authors’ implementation:* <https://github.com/hexiangnan/neural_collaborative_filtering>
   2. *Other implementation:* <https://github.com/yihong-chen/neural-collaborative-filtering>
2. Restricted Boltzmann Machines for Collaborative Filtering.
   1. Implementation (don’t know if it is the best one): <https://github.com/artem-oppermann/Restricted-Boltzmann-Machine>
3. Collaborative Memory Network for Recommendation Systems.
   1. Implementation: <https://github.com/tebesu/CollaborativeMemoryNetwork>
4. *Find more architectures like (Autoencoders, Residual Networks, Recurrent Nets, LSTMs, CNNs).*

**Datasets**

1. **MovieLens ( Link to obtain movielens datasets and paper discussing it )**
   1. <https://grouplens.org/datasets/movielens/>
   2. The MovieLens Datasets History and Context