Q7 Report: MF and Recommendation System

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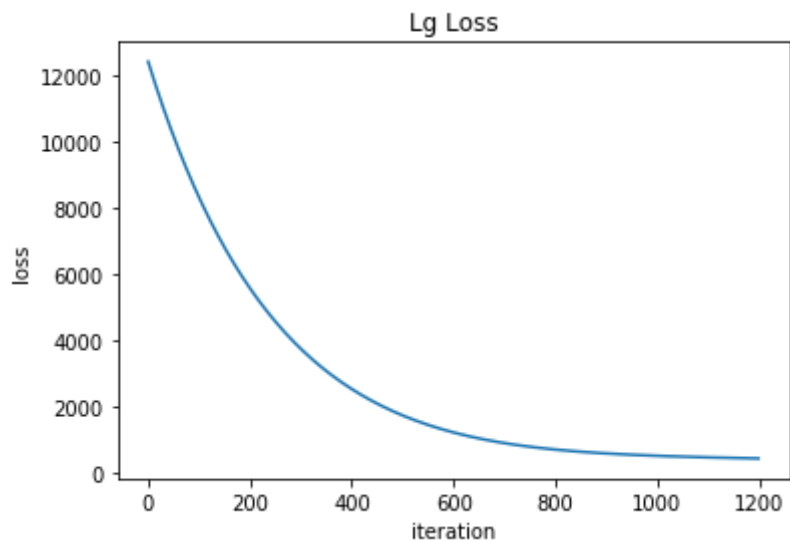
I use pytorch to help me calculate gradient automatically. Actually, the main problem is how to express the the factor matrix and how to define the loss function. If you want to know the detailed process, please see in the Q7.ipynb.

I choose $d = 100$ in all three tasks.
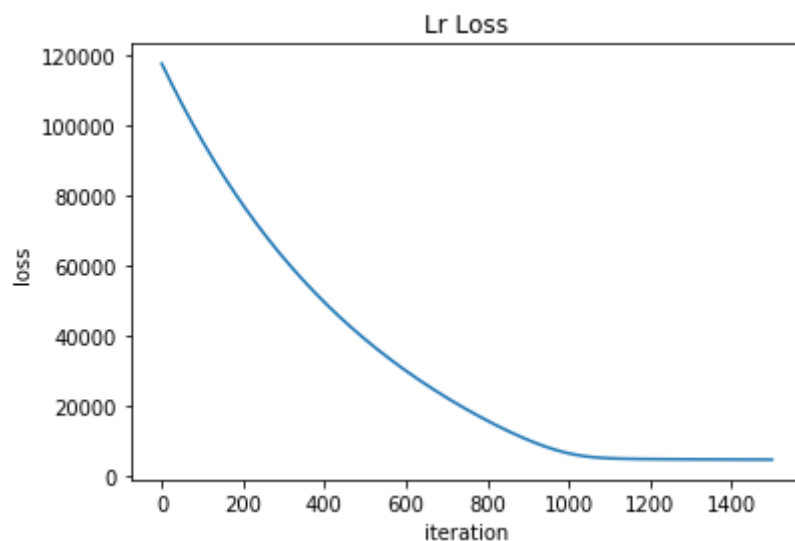
Task 1 learning rate = 1e-3

Iteration = 1200

Final loss of Lg = 428.71881103515625

Task 2 learning rate = 1e-3

Iteration = 1500

Final loss of Lr = 4710.68212890625

Task 3 learning rate = 1e-3

Iteration = 1500

The final loss of Lt = 4774.3779296875

Lt Loss