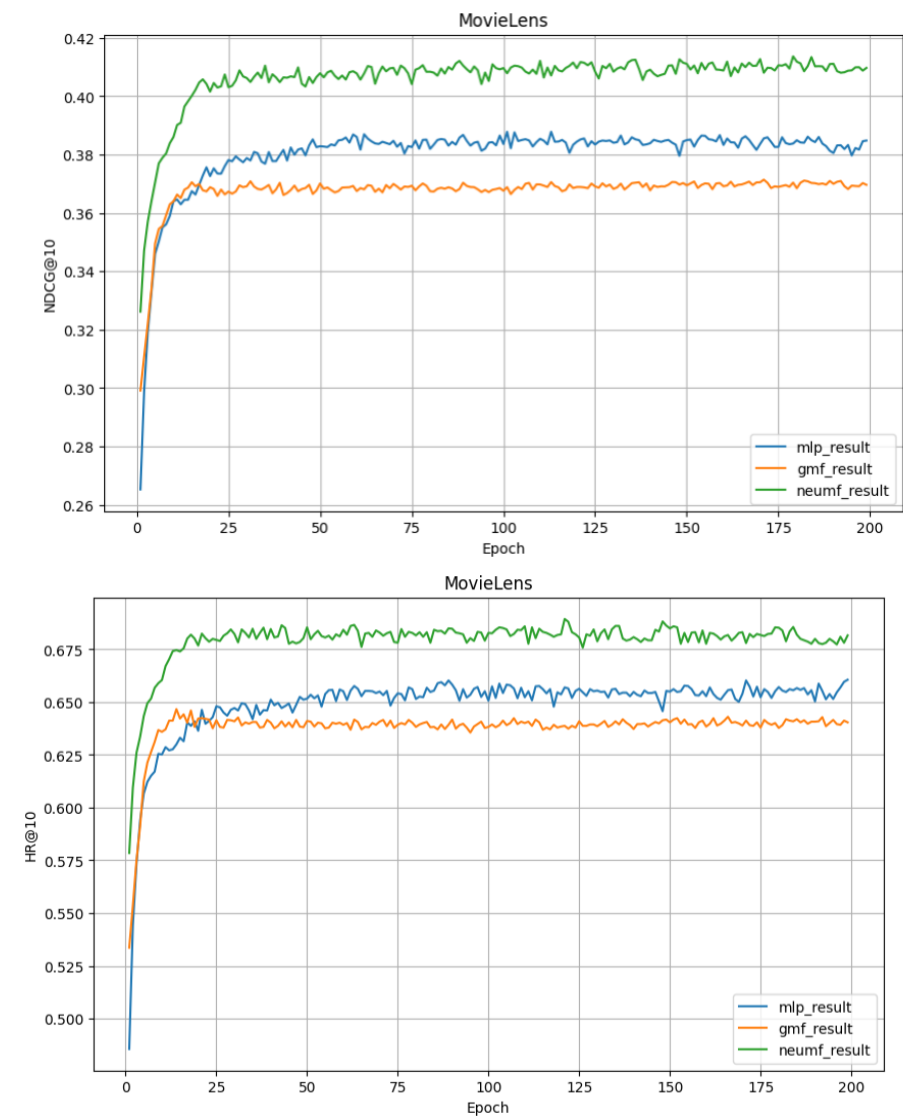# DSP Assignment3

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Pytorch version: 2.3.0

Compare MLP, GMF, NeuMF using the metrics of HR@10 and NDCG@10.

- For the final result, both HR@10 and NDCG@10, NeuMF>MLP>GMF, indicating that NeuMF can recommend more accurately and can recommend the most related items.
- In both of HR@10 and NDCG@10 graphs, GMF converges the earliest, and MLP and NeuMF tend to have the same convergence speed.

Comparing the results of MLP with different layers.

HR@10 of MLP with different layers (MovieLens):

Factors	MLP-0	MLP-1	MLP2	MLP-3	MLP-4
8	0.451	0.606	0.655	0.615	**0.661**

The more the layers, the the more accurate the MLP can recommend. MLP-4 behaves the best in HR@10.