



AI Box

# RecBole 2.0: Towards a More Up-to-Date Recommendation Library

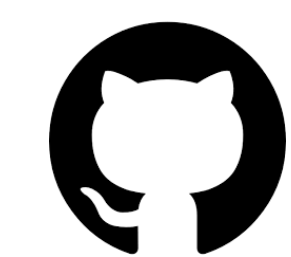
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arXiv paper

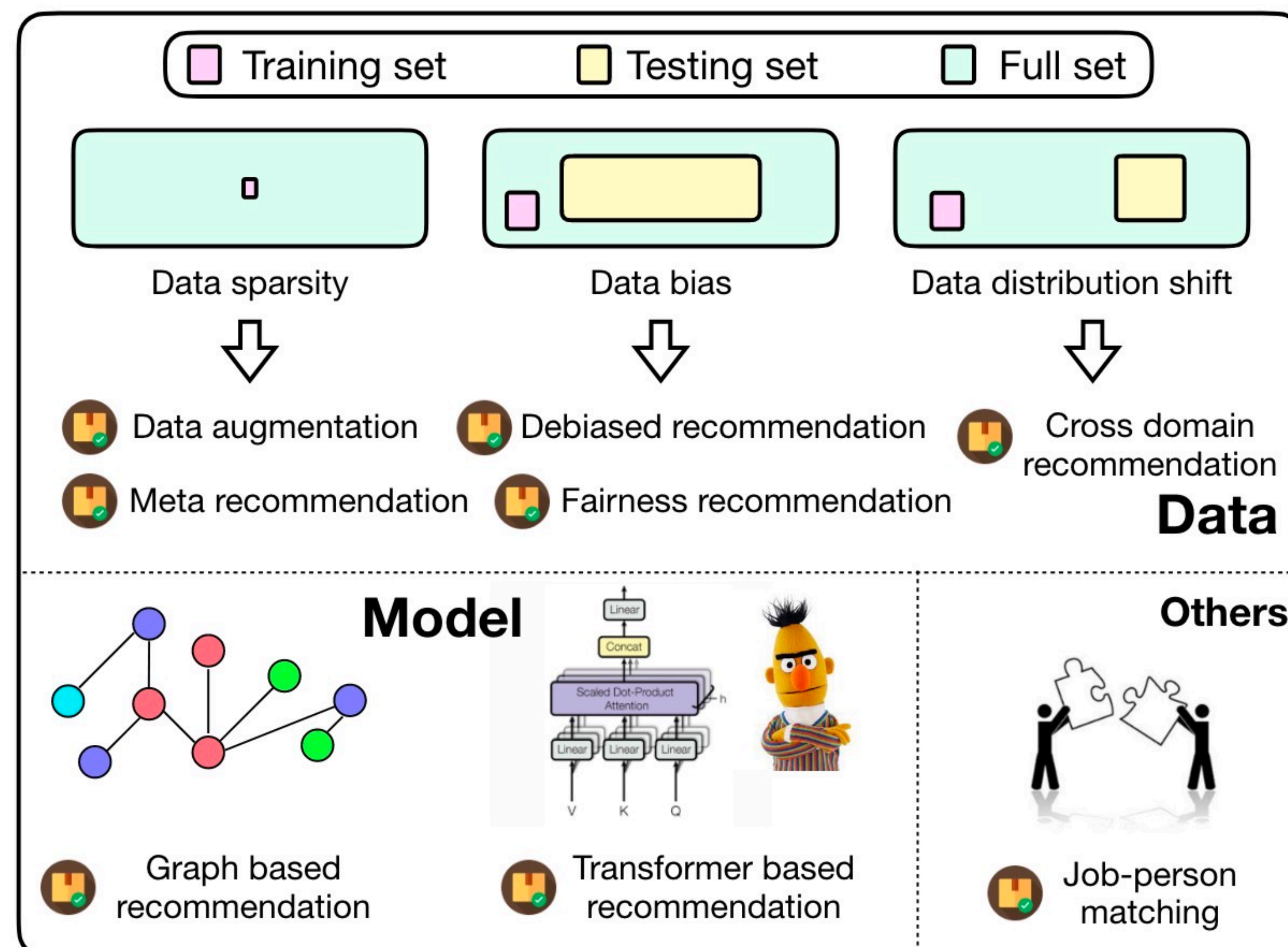
## Review of RecBole 1.0

Open-Source One-Station Library for RecSys Research!



- ☆ 2.1k stars
- 👁 41 watching
- 🔗 392 forks
- Based on PyTorch
- 80+ models, 28 processed datasets
- Covering CF, sequential, session-based, CTR, KG-based, .....
- Unified data processing & evaluation
- Highly efficient on GPU

## What's new in RecBole 2.0?



## Extensions focusing on new areas in recommender system research

- For **Data** sparsity, biases, distribution shift issues
  - Meta-Learning (RecBole-MetaRec)
  - Data Augmentation (RecBole-DA)
  - Debias (RecBole-Debias)
  - Fairness (RecBole-FairRec)
  - Cross-Domain (RecBole-CDR)
- For popular **Models**
  - Graph Neural Networks (RecBole-GNN)
  - Transformers (RecBole-TRM)
- For **Applications**
  - Person-Job Fit (RecBole-PJF)

## Summary for RecBole 2.0

- 8 new sub-modules based on RecBole
- 65 new models (totally 130+!)

Website: [recbole.io](https://recbole.io)

GitHub: [github.com/RUCAIBox/RecBole2.0](https://github.com/RUCAIBox/RecBole2.0)



Welcome any contribution & suggestion!

## Easy and similar usage as RecBole

### Usage cases for each sub-module

```
from recbole_da.quick_start import run_recbole_da

aug_parameter={
    'aug_level': 'data',
    'aug_type': 'item_crop',
    'ratio': '0.3',
    'dataset': 'ml-100k'
}

run_recbole_da(model='SASRec',
               config_dict=aug_parameter)
```

(a) Usage example of RecBole-DA

```
from recbole_debias.quick_start import run_recbole_debias

run_recbole_debias(model='PDA',
                  dataset='yahoo')
```

(d) Usage example of RecBole-Debias

```
from recbole_metarec.MetaUtils import metaQuickStart

modelName, datasetName = 'TaNP', 'ml-100k'
metaQuickStart(modelName, datasetName)
```

(b) Usage example of RecBole-MetaRec

```
from recbole_cdr.quick_start import run_recbole_cdr
run_recbole_cdr
parameter_dict={
    'source_domain': {
        'dataset': 'ml-1m',
        'data_path': 'dataset/'
    },
    'target_domain': {
        'dataset': 'ml-100k',
        'data_path': 'dataset/target/'
    },
    'user_inter_num_interval': '[5,inf)',
    'train_epochs':
    ['SOURCE:300', 'TARGET:300', 'OVERLAP:300']}
run_recbole_cdr(model='EMCDR',
               config_dict=parameter_dict)
```

(e) Usage example of RecBole-CDR

```
from recbole_fairrec.quick_start import run_recbole_fairrec

run_recbole_fairrec(model='FOCF',
                  dataset='ml-1m')
```

(c) Usage example of RecBole-FairRec

```
from recbole_gnn.quick_start import run_recbole_gnn

run_recbole_gnn(model='NCL',
                dataset='ml-1m')
```

(f) Usage example of RecBole-GNN

```
from recbole_trm.quick_start import run_recbole_trm

run_recbole_trm(model='TiSASRec',
                dataset='ml-1m')
```

(g) Usage example of RecBole-TRM