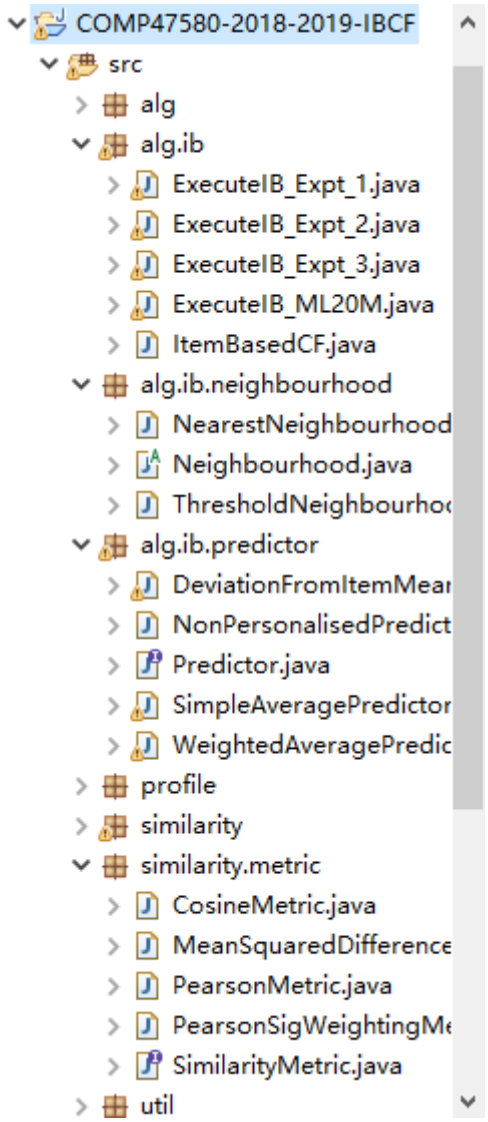
Task guide



The graph shows all the packages in this project.

There are three classes in alg.ib :

ExecuteIB_Expt_1.java
ExecuteIB_Expt_2.java
ExecuteIB_Expt_3.java

ExecuteIB_Expt_1.java Guide:

```
{
// configure the item-based CF algorithm - set the predictor, neighbourhoo
    |
//Predictor predictor = new SimpleAveragePredictor();
Predictor predictor = new WeightedAveragePredictor();
//Predictor predictor = new NonPersonalisedPredictor();
//Predictor predictor = new DeviationFromItemMeanPredictor();
Neighbourhood neighbourhood = new NearestNeighbourhood(i);
SimilarityMetric metric = new CosineMetric();
```

This experiment needs to use:
CosineMetric();
NearestNeighbourhood(i); i=10;20;30… 250;

Also, What we need to do is :
Change 4 times predictor; one predictor run one time.

For example, if we want show DFIM predictor RMSE/coverage
Do like this:

```
//Predictor predictor = new WeightedAveragePredictor();
//Predictor predictor = new SimpleAveragePredictor();
//Predictor predictor = new NonPersonalisedPredictor();
Predictor predictor = new DeviationFromItemMeanPredictor();
```

Last, run this class.

Result:
For example:

```
Neighbourhood size = 10
RMSE: 1.032238
coverage: 85.24%
Neighbourhood size = 20
RMSE: 0.996726
coverage: 92.94%
Neighbourhood size = 30
RMSE: 0.978210
coverage: 95.81%
Neighbourhood size = 40
RMSE: 0.971084
coverage: 97.22%
Neighbourhood size = 50
RMSE: 0.968207
coverage: 98.15%
Neighbourhood size = 60
RMSE: 0.960664
coverage: 98.56%
Neighbourhood size = 70
RMSE: 0.957545
```

ExecuteIB_Expt_2.java Guide:

```
{
// configure the item-based CF algorithm - set the predictor, neighbourhood and simi

//Predictor predictor = new SimpleAveragePredictor();
//Predictor predictor = new WeightedAveragePredictor();
//Predictor predictor = new NonPersonalisedPredictor();
Predictor predictor = new DeviationFromItemMeanPredictor();
Neighbourhood neighbourhood = new ThresholdNeighbourhood(i);
SimilarityMetric metric = new CosineMetric();
```

This experiment needs to use:
CosineMetric();
ThresholdNeighbourhood(i)　$i \in [0, 0.70]$

Also, what we need to do is :
Change 4 times predictor; one predictor run one time.

For example, if we want show DFIM predictor RMSE/coverage in this condition
Do like this:

```
//Predictor predictor = new WeightedAveragePredictor();
//Predictor predictor = new SimpleAveragePredictor();
//Predictor predictor = new NonPersonalisedPredictor();
Predictor predictor = new DeviationFromItemMeanPredictor();
```

Last, run this class.

ExecuteIB_Expt_3.java Guide:

```
// configure the item-based CF algorithm - set the predictor, neighbourhood and

Predictor predictor = new DeviationFromItemMeanPredictor();
Neighbourhood neighbourhood = new NearestNeighbourhood(200);

//SimilarityMetric metric = new CosineMetric();
//SimilarityMetric metric = new PearsonMetric();
//SimilarityMetric metric = new PearsonSigWeightingMetric(50);
SimilarityMetric metric = new MeanSquaredDifferenceMetric();
```

This experiment needs to use:

Predictor predictor = new DeviationFromItemMeanPredictor();
Neighbourhood neighbourhood = new NearestNeighbourhood(200);

Also, what we need to do is :
Change 4 times metric; one metric run one time.

For example, if we want show MSD Metric RMSE/coverage in this condition
Do like this:

```
//SimilarityMetric metric = new CosineMetric();
//SimilarityMetric metric = new PearsonMetric();
//SimilarityMetric metric = new PearsonSigWeightingMetric(50);
SimilarityMetric metric = new MeanSquaredDifferenceMetric();
```

And run the class.