\*Some of the algorithms implemented in this package are under US patent application. Please use it only for academic purposes.

This folder contains implementation of different algorithms; here is a list of files:

|  |  |
| --- | --- |
| **File Name** | **Description** |
| Degree.h/cpp | Highest degree |
| Weighteddegree.h/cpp | Weighted degree |
| pagerank.h/cpp | Pagerank |
| DegreeDiscount\_IC.h/cpp | Degree Discount IC [2] |
| Graph.h/cpp | Reading the graph data from standard input |
| Greedy.h/cpp | Greedy algorithm, accelerated by CELF |
| Independ\_Cascade.h/cpp | Implementation of IC model. |
| Limit.h | Some parameters |
| Main.cpp | The main program, different algorithms are selected by switches.  (“windows.h” is included in this program) |
| Random.h/cpp | Picking nodes randomly |
| Greedy\_topk.h/cpp | Hybrid algorithm framework of discount and anything (greedy/spm) |
| general\_cascade.h/cpp | Implementation of GC model. |
| SPM\_gc.h/cpp | Implementatin of SPM for GC, optimized according to submodularity |
| SP1M\_gc.h/cpp | Implementatin of SP1M for GC, optimized according to submodularity |
| pmia.h/cpp | Implementation of PMIA [1] |
| mia.h/cpp | Implementation of MIA [1] |
| mis.h/cpp | Implementation of MIS (Marginal influence sort) [3] |
| top\_selection.h/cpp | Implementation of BTS (best topic selection, a.k.a. top selection) [3] |
| CGreedy.h/cpp | Implementation of CGreedy [3] |
| topic\_aware.h/cpp | Reading preprocessed seeds from files |

If you use this code in the above, please cite one of the following papers:

[1] Wei Chen, Chi Wang, and Yajun Wang. Scalable influence maximization for prevalent viral marketing in large-scale social networks. In Proceedings of the 16th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD'2010), Washington DC, U.S.A., July 2010.

[2] Wei Chen, Yajun Wang, and Siyu Yang. Efficient influence maximization in social networks. In Proceedings of the 15th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD'2009), Paris, France, June 2009.

[3] Wei Chen, Tian Lin, and Cheng Yang, Efficient Topic-aware Influence Maximization Using Preprocessing, <http://arxiv.org/abs/1403.0057>

README – code

**Change list:**

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