

Machine Learning HW7

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1 Parallel PageRank

1. Parts a-d have been completed. Results for all methods on the livejournal and friendster data sets are in tables 1 and 2 below, respectively. My results on Galois and Spark seem to be odd.

Run Time(s, unless specified): 20 iter: livejournal			
Method	1 Thread	8 Thread	16 Thread
Graphlab	86.2	15.1	9.4
Openmp	19	9	5.8
Galois	17.6	7.8	4.3
Mahout	13m50s	-	-
Spark	38m	-	-

Run Time(s,unless specified): 20 iter: friendster			
Method	1 Thread	8 Thread	16 Thread
Graphlab	193.2	164.2	103.5
Openmp	517	169	127
Galois	102	98	45
Mahout	53m	-	-
Spark	21h	-	-

2 Distributed ALS

1. Mahout downloaded and built.
2. I will not be reporting any results for Mahout since I kept getting connections errors.

3 Newton Method for Logistic Regression

1. All algorithms have been implemented. Output for current algorithm below

```
451779
new val: 0.726336
new val: 1.97509
new val: 10.7821
```

new val: 1.57576
new val: 0.998515
new val: 0.630488
new val: 0.573339
new val: 0.887555
new val: 15.7707
new val: 0.269319
7.12489e+06
new val: 0.269319
7.12489e+06
new val: 0.269319
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new val: 0.269319
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new val: 0.269319

2.