We chose to use GraphLab as a reference point to judge application performance as it is designed to run in a shared memory environment. Comparing Application Performance

All trials were done with the Pagerank algorithm as a reference algorithm.

The emerging applications for large graphs in big data science and social networks has led to the development of numerous graph processing systems. The field of graph processing is very well defined with many existing commercial and opensource applications and tools available. The Wikipedia Talk Network dataset from Stanford SNAP collection was used to test the performance of the systems.

Apache Giraph

Apache Spark

Hadoop

The Pregel Model is often used as the basis for distributed graph processing. This work was supported in part by the National Science Foundation under awards NSF-1461260 (REU).

References


GraphLab: A Pregel Based Shared-memory Graph Processing Library

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Abstract

FemtoGraph is based off of the Pregel Model of graph processing. The Pregel Model is often used as the basis for distributed graph processing. This work was supported in part by the National Science Foundation under awards NSF-1461260 (REU).

Future Work

The emergence of new applications for large graphs in big data science and social networks has led to the development of numerous graph processing systems. The field of graph processing is very well defined with many existing commercial and open-source applications and tools available.

Testing Conditions

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