Title

bvgraph

Keywords

matlab large graph compressed BVGraph pagerank

Summary

A matlab class to work with highly compressed BVGraph files.

Description

The bvgraph class makes working with enormous graph adjacency matrices in Matlab a snap. The class implements an interface to BVGraph files (<http://webgraph.dsi.unimi.it>) that emulates a Matlab sparse matrix.

For example,

>> G = bvgraph(‘data/wb-cs.stanford’);

>> size(G);

>> y = G\*rand(size(G,1),1);

are all valid operations. See the “bvgraph example” file for a more exhaustive explanation.

The goal of the library is to support computing PageRank with a 1 billion link graph and 120 million nodes possible inside Matlab with only 2 GB of memory. To load the matrix itself on a 64-bit platform would take around 10 GB of memory. As the “huge graphs” example shows, the bvgraph class achieves this goal.

To find additional datasets, see http://law.dsi.unimi.it/index.php?option=com\_include&Itemid=65.

Category

Data Import/Export

Other requirements

The software was tested on

Matlab 2007a on amd64 Ubuntu 7.04

Matlab 2006b on amd64 Ubuntu 7.04

Matlab 2006b on amd64 Ubuntu 6.06.1 Server

Matlab 2007a on i686 Linux

Matlab 7.0 on i386 Windows

Matlab 2007a on i386 Windows

Test