

CSC 391/691 Project 3 Overview  
Due 4/17/14

This project will involve implementing a simplified PageRank algorithm.

Download from Sakai → Data two files named WFU\_links.txt and WFU\_URLs.txt.

WFU\_URLs contains approximately 10,000 URLs that were crawled starting at <http://www.wfu.edu/>. Each URL has a unique integer identifier. You may or may not use this file for the bulk of the project.

WFU\_links.txt contains approximately 10,000 “from→to” links stored in a very simple format. Each line contains *fffff:ttttt* where *fffff* and *ttttt* are integers corresponding to a URL in the URL file.

[NOTE: The data is also available as a single SQLite file on Sakai.]

- 1- Implement the simplified PageRank algorithm and identify the ten web pages with the highest ranking (report the URLs) – unless they all turn out to be 0 after 50 iterations. You will probably need to use a compact repre
- 2- Add a *teleportation* factor to prevent ranks from going to 0.
  - a. With Beta set to 0.9, what are the ten web pages with the highest ranking (report the URLs).
  - b. With Beta set to 0.8, what are the ten web pages with the highest ranking (report the URLs).
- 3- Using the top ten list from Part (2), select the highest ranked page to test for spam, as follows. Using the other 9 URLs as trusted pages, compute the *spam mass* of the highest ranked page.

Deliverables

Your answers from parts 1-3 along with a narrative description of how you arrived at those answers and any interesting observations during your exploration of the data.