CS387 Project: Test Plan

Team

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Functional Testing

The designed interface would be public (no special access/login required).
We would have user inputs in the form of dropdown filters, search bars and range selectors, which would be finalized while designing the frontend UI. We plan to check the behavior of each of these using different valid and invalid inputs. We also plan to test the output of various different charts/graphs (bar, line, pie charts, and citation, coauthor networks) used for visualization, especially in the extreme settings (when no data is available and when large amounts of data is available). The exact details about the UI and the charts are present in the Design Document.

Load Testing

The real dataset we intend to use would be created by parsing, cleaning and validating data collected from a subset of below data sources. We plan to measure the time taken for computing the metrics and the response times after different user inputs (search bar inputs, range queries, etc.).

1. dblp.xml (https://dblp.org/faq/1474679.html)
   79457393 nodes in xml tree
   6061206 Total Publications (3010090 Formal Conference Papers)
   2977403 Authors and 7813 Venues
   Dataset was last updated on 2022-04-01

2. DBLP-Citation-network V13 (https://www.aminer.org/citation)
   5,354,309 Papers and 48,227,950 citation relationships
   Dataset was last updated on 2021-05-14

3. Data used in csmetrics.org using Microsoft Academic Graph (https://github.com/csmetrics/csmetrics.org/tree/master/data)
   Papers along with citations on paper id for 2007 to 2020 year range

4. Semantic scholar dataset (https://api.semanticscholar.org/graph/v1)