CS410: Project Progress Report

Free Topics: Topic querying on UIUC MCS Slack and Campuswire

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Progress Made:

- Implement CLI interface:
    - We began stubbing out the Click commands for our CLI interface. Since we haven't set up our mainline aggregation/query functions, these are largely just empty stubs with parameters/options.
    - We have set up our Python application, with a **setup.py** to enable packaging of our project. We have also included a **requirements.txt** to enable easy installation of application requirements. This allows end users to easily install and begin working with our application!
- Implement Campuswire library
    - We have fully implemented our Campuswire API and interface.
    - This interface supports dataclasses to package relevant data to be used by our querying engine (CampusWireThread and CampusWireMessage).
    - Our CampusWire library supports pagination and caching of results, so we do not repetitively request the API when unnecessary.
- Implement Slack interface
    - We have fully implemented our Slack interface using the slack_sdk python package.
    - Our Slack interface, like Campuswire, supports custom dataclasses to manage relevant extracted data, and features pagination and caching of slack results.

Remaining Tasks:

- Implement document ranking on merged Slack/Campuswire topics
- Implemented clustering deduplication on results.
- Creating evaluation test collection.
- Parameter tuning
    - Clustering algorithm/parameters
    - Ranking function/parameters

Challenges/Issues:

- We had initial difficulties getting the Slack API to work. The documentation wasn't the best, so we had trouble finding what the Slack "channel ID" was at first. Fortunately, a quick google search gave as an easy answer from StackOverflow

(https://stackoverflow.com/questions/40940327/what-is-the-simplest-way-to-find-a-slack-team-id-and-a-channel-id)

- We had difficulty reverse-engineering the CampusWire API to understand authentication and API workflows. We used Google Chrome's developer tools to discern network calls to the CampusWire API and the appropriate API parameters/JSON content.
- We had difficulty handling Campuswire authentication. Unlike the Slack API, the Campuswire Authentication routes didn't have a static API key which we could utilize. Rather, we used our individual sessions API token.