MLTK - Tweet Sentiment Analysis with MeTa & NLTK
CS 410: Text Information Systems
Group Name: MLTK_410
December 8, 2022

Abstract:

The objective of this group project is to develop an application that will integrate MeTA with NLTK to provide a sentiment analysis of any media shared on social media. End users of the application will be able to filter and rank documents gathered based on sentiment of each document.

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Progress Update:

Task	Description	Status % Complete
Document Collection	This task is the development of the document collection module that will harvest documents from a source (Twitter) and product an output that is	Complete
MeTa Integration	This task is the development of code to leverage MeTa features such as filtering and ranking on the documents collected.	Complete
NLTK Integration	This task is the development of code to leverage native NLTK features to perform sentiment analysis on the documents collected. *Skeleton code had to used due to missing submission. *See Challenges*	Complete
User Interface and Integration	This task is the development of the user interface and the integration of the document collection, MeTa, and NLTK modules for the course project.	Complete
Integration Testing	This task is for testing the solution end to end.	Complete

Challenges

- Sentiment analysis code was not provided in time for integration to the overall project. For this reason the placeholder code for this section will be in the project submission.

- (*Previously Reported)* It was difficult to find a working twitter API despite having documentation available. Eventually the snscrape library was located and its currently working in a Python 3.9 environment.
    - **UPDATE:** The group determined that we would resolve this with a dual-environment installation. Integration is achieved by scripting.
        i. 3.7 environment to run the text analysis portion of the application
        ii. 3.9 environment to provide a text for analysis.
- (*Previously Reported)* The python library, snscrape, is only working in a Python 3.9 environment. Previous work showed that MeTa was only reliable in a deprecated 3.5 environment. This will be a significant challenge to address. We are investigating a thread where someone has reported running MeTa in a 3.9 environment.
    - https://campuswire.com/c/G984118D3/feed/1209
    - **UPDATE:** Resolved by dual-environment installation detailed above.