MLTK - Tweet Sentiment Analysis with MeTa & NLTK
CS 410: Text Information Systems
Group Name: MLTK_410
November 13, 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.

Team:

Luis Chavez - lwchave2@illinois.edu
Adam Michalsky - adamwm3@illinois.edu
Yijing Yang - yjingy2@illinois.edu
Sri Ram Eswaram - srirame2@illinois.edu

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	In Progress (80-90%)
MeTa Integration	This task is the development of code to leverage MeTa features such as filtering and ranking on the documents collected.	In Progress (20%)
NLTK Integration	This task is the development of code to leverage native NLTK features to perform sentiment analysis on the documents collected.	In Progress (5%)
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.	In Progress (40%)
Integration Testing	This task is for testing the solution end to end.	Not Started

Challenges:

- It was difficult to find a working twitter API despite having documentation available. Eventually the snscrape library was located and it's currently working in a Python 3.9 environment.
- 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
- Validation of sentiment analysis will run into issues when popular sentiment differs from critic/publisher sentiment.