

Team MPDL Final Project Proposal: CS410 – Fall 2022

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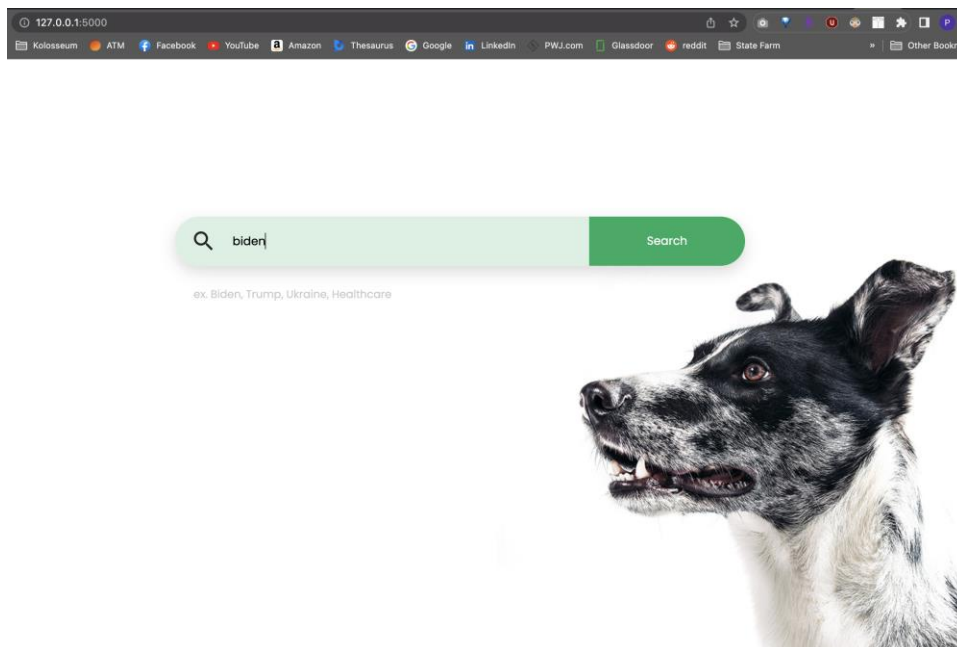
Names, NetIDs, Captain

Team MPDL consists of the following members (NetID): Michaela Horn (mmhorn2), Peter Jefferson (peterwj2), Da'Mon Morris (dmorri25), and Lookman Olowo (lolowo2). The captain of the team is Peter Jefferson (peterwj2).

Which Tasks Have Been Completed?

Since our project proposal, our team has held a few meetings and accomplished some of the main tasks for the project. First, we created a Twitter account and set it up so we can utilize the API feature through it. We wrote a Python script to interface with the Twitter API that returns tweets for a given query.

We also implemented a Flask framework in our project and built out a simple search bar page as well as a results page.



We then linked the back-end and front-end so that when a user inputs a query and clicks “Search” it takes them to the results page and displays the results as well as the tweet’s sentiment.

RESULTS PAGE		
	Tweet	Sentiment
	RT @JesseKellyDC: Biden wearing a Mao clown outfit to meet with Xi will be played in every WWII documentary one day. It will be just like...	neutral
	@SpokespersonCHN I just can't imagine how Xi felt when Biden was lying in front of him by saying so many lies....co... https://t.co/ktEl57OHY8	positive
	The National Library of Medicine has posted an art. by R.L. Blaylock stating that the pandemic was a hoax, the Bide... https://t.co/eDTYQQSAbo	neutral
	RT @vdare: 'Darden went on to become a partner in a Cleveland law firm and was nominated by President Joe Biden to be the first Black woman...	negative
	RT @mmpadellan: The age chorus saying President Biden should retire but is completely silent about 76-year old trump, 80-year old McConnell...	positive
	@finn_cabbage @ConsiderEric Joe Biden.	neutral
	RT @JoJoFromJerz: If you're fine with electing a dude in Iowa who carbon dates to the Jurassic Period, I don't wanna hear shit about Joe Bi...	positive
	RT @MachmudRaissa: Anies Tidak Cocok Maju Pilpres, gimana menurut kalian guys? Randy Pangalila Meresahkan Semangaaaattttt Indiraaaaa GOAT...	neutral
	RT @DougJBalloon: Democrats Escaped a Midterm Thrashing. Here's How to Primary Biden Anyway. https://t.co/lijsCMD51k via @politico	positive
	RT @tribelaw: Justice Thomas violated 28 USC 455 (a) & 28 USC 455 (b)(5)(iii) by not recusing himself from this 7-2 decision: His wife Ginn...	neutral
	Biden: "No creo que haya suficientes votos" para que demócratas codifiquen Roe vs Wade - The Epoch Times en español... https://t.co/0VI0vJjGgq	neutral
	RT @birrion: Biden lied about student loan debt and codifying Roe v Wade. The Democratic Party is absolutely useless	negative
	RT @lindyli: Trump is set to announce his presidential campaign tomorrow Media: Please DO NOT air it! Non-cable networks didn't air eithe...	neutral
	@xavierbonilla87 I cant recall anything super "woke" that he has said off the top of my head but i'm sure he has sa... https://t.co/oImMSXtn91	positive
	Biden tras su reunión con Xi: Estoy absolutamente convencido de que no es necesario que haya una nueva guerra fría... https://t.co/02vG7T9VH3	neutral
	Biden says North Korea nuclear testing would prompt bigger U.S. presence in the region https://t.co/lKFwjZlhvV https://t.co/xltO4yzL7m	neutral
	RT @TheRickyDavila: The same people who are concerning themselves with the ages of Nancy Pelosi and President Biden although both are extre...	neutral
	RT @Mollyploffkins: There hasn't been a single riot in America since President Biden's inauguration. Words have consequences.	negative
	RT @MarioNawfal: Hunter Biden joins the show in 15.5 hours to discuss his art and his interest in NFTs & crypto! https://t.co/g79p0wwYde...	neutral
	RT @kntack: selasa pagii semangaaaattttt indiraaaaa ada dian saastro randy pangalila meresahkan sctvawards2022 biden sekjen pbb kediri nem...	neutral
	RT @JessicaGKwong: Joe Biden and China's Xi Jinping finally meet face-to-face and seek to avoid 'new Cold War' https://t.co/zAwdsQ6oTu	negative
	RT @JVR926: I DESPISE JOE BIDEN and I am sure I am not alone	positive
	@AbeFroman86 @BlastPascal @daveweigel Biden was +1 in PA. Fetterman outperformed Biden	neutral
	RT @SethDillon: So Biden gave loads of money to Ukraine, who gave loads of money to FTX, who gave loads of money to Democrats. Sounds like...	neutral
	RT @wyonaf: 40 million students may not receive the Biden federal student loan forgiveness because of one conservative Texas judge. This ap...	neutral
	RT @townhallcom: REPORTER: "What can Americans expect from Congress as it relates to abortion rights after the midterms?" BIDEN: "I don't..."	neutral
	RT @JamesBradleyCA: Facts: Biden funded Ukraine. Ukraine funded FTX. FTX funded Democrats with millions. This is known as "money launde..."	neutral
	RT @TomFitton: Was Biden's unlawful student debt scheme election interference?	neutral
	RT @w_terrence: Joe Biden & Zelenskyy have been laundering money. Biden funded Ukraine. Ukraine funded FTX. FTX funded Democrats with mil...	neutral
	Student loan 'buyout', abortion won midterms for Democrats, Biden, critics say Fox News. Unfortunately Judge Jean... https://t.co/OWxT6x9O49	negative
	What can the new Congress do to solve the border crisis? 🇺🇸 Impeach DHS Secretary Mayorkas 🇺🇸 Conduct oversight... https://t.co/bUJQB3DSjy	positive

Lastly, we have been researching and redesigning portions of our projects in response to some of the feedback we received. We are adding more material from the course as a TA suggested. To do this we will not only be performing a sentiment analysis on the tweets, but also utilizing topic modeling to suggest related topics to search to the user once they search a few times. We have inserted a Draw.io diagram in the GitHub repository as well.

Which Tasks Are Pending?

We still have quite a few things to add on to our project. First, we need to find a way to save a user's queries so that we can suggest similar topics to them to query. Next, we need to implement the topic modeling algorithm into our back-end. We also need to write a couple of functions to clean, prepare, and return the queried tweets in a structured manner so that they do not have emojis, special characters, and are formatted as a 'document' in our returned results.

After, we also need to design the front-end to display the results cleaner, offer a filtering or ranking option, and make the tweets clickable. We will also need to include the options to filter a query by certain Twitter news pages if the user only wants to see results from certain news sources. This will most likely be accomplished via the use of HTML check boxes.

Lastly, we will also need to make the application more resilient to handle errors, null entries, and other bugs. We then will need to test the app by reading articles/tweets the are returned

for a query, deciding what our sentiment is on the article/tweet and comparing it to what the application returned.

Are you Facing any Challenges?

So far, we have only had a couple of challenges. The first being everyone's schedule lining up for the past couple of weeks; everyone has been very busy. We also still need to figure out how to implement the class algorithms into our application for our use case. We have been looking at past lectures and MPs to figure out how to best approach implementation of the topic modeling portion into our application.

In addition, we need to implement a way to save user's queries so that we can use them to suggest other related topics to search. We plan on using a local CSV file for this, but we may need to move to something more resilient like a database.

We are all also new to Flask, so we have been slowly coming up to speed on how to properly use the framework, and how to communicate between the back-end and front-end.