

1. What are the names and NetIDs of all your team members? Who is the captain? The captain will have more administrative duties than team members.
  - a. Nikhil Deenamsetty ndeena2 (captain)
  - b. Peter John Wasala pwasal3
  - c. Jiahua He jiahuah2
  - d. Angela Carol Jaw ajaw2
2. Which paper have you chosen?
  - a. Mining Causal Topics in Text Data: Iterative Topic Modeling with Time Series Feedback
3. Which programming language do you plan to use
  - a. Python
4. Can you obtain the datasets used in the paper for evaluation?
  - a. Yes.
5. If you answer “no” to Question 4, can you obtain a similar dataset (e.g. a more recent version of the same dataset, or another dataset that is similar in nature)?
  - a. N/A
6. If you answer “no” to Questions 4 & 5, how are you going to demonstrate that you have successfully reproduced the method introduced in the paper?
  - a. N/A
- What is the function of the tool?
  - To analyze textual topics in conjunction with external time series variables.
- Who will benefit from such a tool?
  - Anyone that needs to analyze text along with time series variables. For example, stock traders can benefit from this tool because this tool could help a stock trader decide what stocks to buy, hold, or trade since news articles can tell more information about the future of a stocks’ value.
- Does this kind of tool already exist? If similar tools exist, how is your tool different from them? Would people care about the difference?
  - Yes, this kind of tool already exists. The difference between the similar tool that we found and ours is that the similar tool that we found displays geometric properties and our tool displays prior distributions on parameters. People would probably prefer our tool more since it provides feedback at each iteration.
- What existing resources can you use?
  - <https://catalog.ldc.upenn.edu/LDC2008T19> (Dataset)
  - <https://spiderbites.nytimes.com/2000/> (NYT Articles Backup)
  - [https://iemweb.biz.uiowa.edu/pricehistory/pricehistory\\_SelectContract.cfm?market\\_ID=29](https://iemweb.biz.uiowa.edu/pricehistory/pricehistory_SelectContract.cfm?market_ID=29) (Iowa Electronic Markets (IEM) Time Series Data)
  - <https://finance.yahoo.com/quote/AAL/history?period1=946684800&period2=978220800&interval=1d&filter=history&frequency=1d&includeAdjustedClose=true> (American Airlines Stock Data)
  - <https://finance.yahoo.com/quote/AAPL/history?period1=946684800&period2=978220800&interval=1d&filter=history&frequency=1d&includeAdjustedClose=true> (Apple Stock Data)
  - MeTA toolkit for topic modeling algorithms

- What techniques/algorithms will you use to develop the tool? (It's fine if you just mention some vague idea.)
  - PLSA or Latent Dirichlet Analysis (LDA) as Topic Model
  - Granger causality measure testing
- How will you demonstrate the usefulness of your tool?
  - Give a presentation on how you could use this tool to help a user decide what stocks to buy, hold, or trade and show how news articles can influence stock prices.
- A very rough timeline to show when you expect to finish what. (The timeline doesn't have to be accurate.)
  - Gather data and necessary resources to complete project (10/25)
  - Finish Iterative Topic Modeling Algorithm (11/15)
  - Create Documentation (11/22)
  - Create Presentation (11/29)