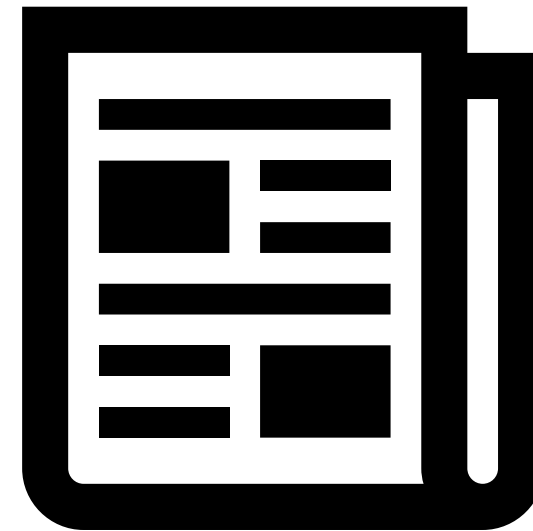




NEWS

DSC 680 Project Two
Krystina Moses



BACKGROUND

“Disinformation is the deliberate creation and/or sharing of false information in order to mislead and misinformation is the act of sharing information without realizing it's wrong” (Bellemare, 2019).

HOW TO SPOT FAKE NEWS



CONSIDER THE SOURCE

Click away from the story to investigate the site, its mission and its contact info.



READ BEYOND

Headlines can be outrageous in an effort to get clicks. What's the whole story?



CHECK THE AUTHOR

Do a quick search on the author. Are they credible? Are they real?



SUPPORTING SOURCES?

Click on those links. Determine if the info given actually supports the story.



CHECK THE DATE

Reposting old news stories doesn't mean they're relevant to current events.



IS IT A JOKE?

If it is too outlandish, it might be satire. Research the site and author to be sure.



CHECK YOUR BIASES

Consider if your own beliefs could affect your judgement.



ASK THE EXPERTS

Ask a librarian, or consult a fact-checking site.

DATASET

title	text	subject	date	result
Donald Trump Sends Out Embarrassing New Year'...	Donald Trump just couldn't wish all Americans ...	News	December 31, 2017	false
Drunk Bragging Trump Staffer Started Russian ...	House Intelligence Committee Chairman Devin Nu...	News	December 31, 2017	false
Sheriff David Clarke Becomes An Internet Joke...	On Friday, it was revealed that former Milwauk...	News	December 30, 2017	false
Trump Is So Obsessed He Even Has Obama's Name...	On Christmas day, Donald Trump announced that ...	News	December 29, 2017	false
Pope Francis Just Called Out Donald Trump Dur...	Pope Francis used his annual Christmas Day mes...	News	December 25, 2017	false

First five



Last five

title	text	subject	date	result
'Fully committed' NATO backs new U.S. approach...	BRUSSELS (Reuters) - NATO allies on Tuesday we...	worldnews	August 22, 2017	true
LexisNexis withdrew two products from Chinese ...	LONDON (Reuters) - LexisNexis, a provider of l...	worldnews	August 22, 2017	true
Minsk cultural hub becomes haven from authorities	MINSK (Reuters) - In the shadow of disused Sov...	worldnews	August 22, 2017	true
Vatican upbeat on possibility of Pope Francis ...	MOSCOW (Reuters) - Vatican Secretary of State ...	worldnews	August 22, 2017	true
Indonesia to buy \$1.14 billion worth of Russia...	JAKARTA (Reuters) - Indonesia will buy 11 Sukh...	worldnews	August 22, 2017	true

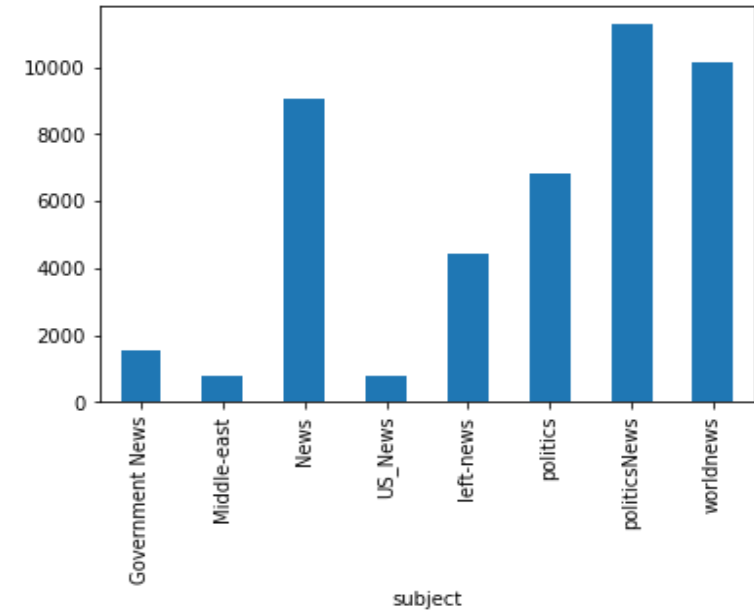
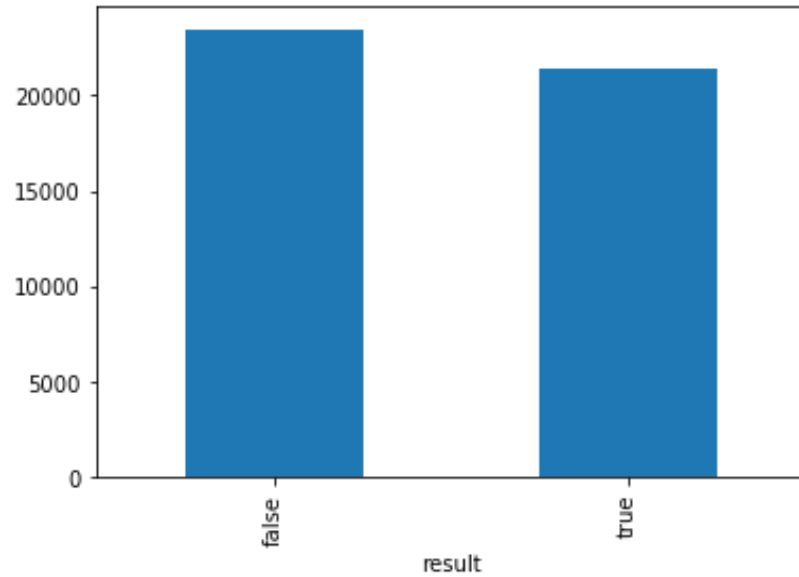
Column Name	Data Type	Description
title	object	Title of the article
text	object	Text of the article
subject	object	Subject of the article
date	object	Date when the article was posted
result	object	News type True (real) / False (fake)



DATASET DESCRIPTION

Data Prep/ Exploratory Data Analysis

- Review and verify info type and for missing and null values
- Combine true/false datasets into one
- Add new column for results
- Create data visualizations for better understanding



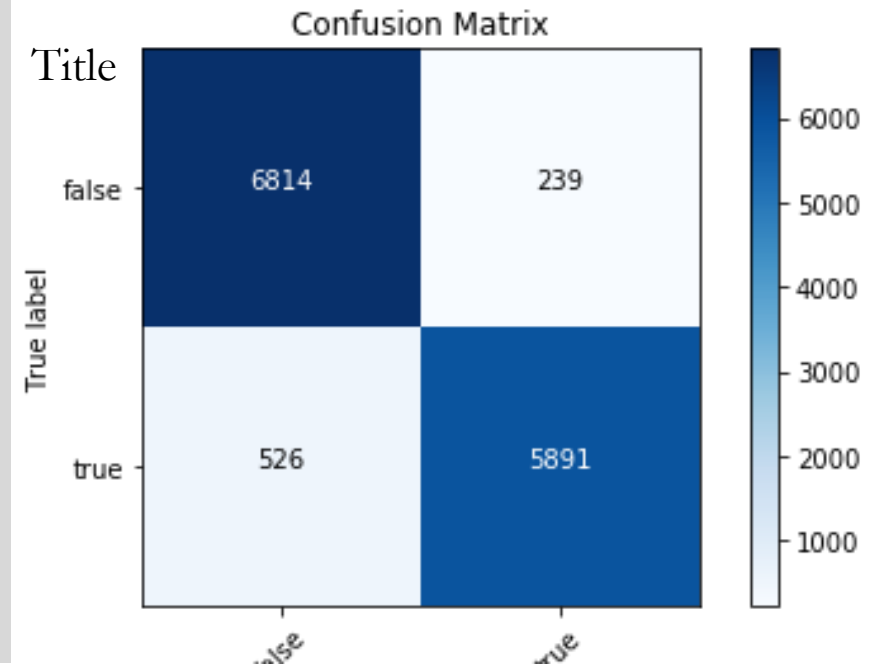
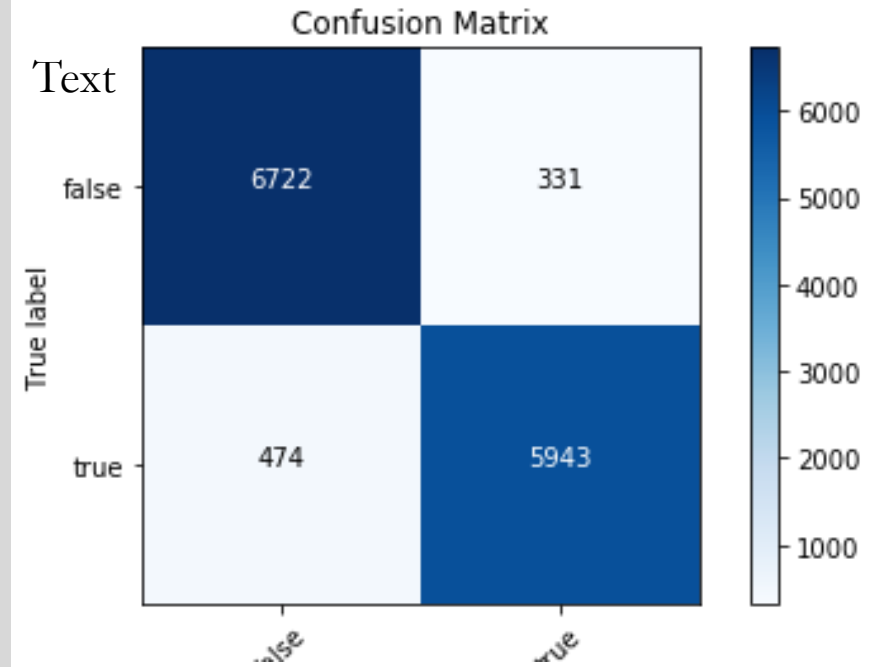
UNDERSTANDING THE DATA THROUGH GRAPHS

Models

- Data cleaning, exploratory data analysis, visualization methods and text classification were analyzed and used using Python, specifically Jupyter Notebook.
- The target variable was the result of False/True.

Results

- The results show the number of false articles outweigh the number of real articles. It is also shown that the subjects of politic and world news are the big headlines, next to general news.
- The text column has the multinomial naive bayes model came out with a 94% accuracy and logistic regression came out to a 98.7% accuracy rating.
- The title column, has the results of the multinomial naive bayes model as 94.3% accuracy and logistic regression as 95.5%.
- Both show the confusion matrix with a low amount within the true and false negatives.



References

- Bellemare, A. (2019, July 05). The real 'fake news': How to spot misinformation and disinformation online | CBC News. Retrieved from <https://www.cbc.ca/news/technology/fake-news-misinformation-online-1.5196865>
- Davis, W. (2016, December 05). Fake Or Real? How To Self-Check The News And Get The Facts. Retrieved from <https://www.npr.org/sections/alltechconsidered/2016/12/05/503581220/fake-or-real-how-to-self-check-the-news-and-get-the-facts>
- Elliott, C. (2019, February 21). Here Are The Real Fake News Sites. Retrieved from <https://www.forbes.com/sites/christopherelliott/2019/02/21/these-are-the-real-fake-news-sites/>
- Fake News, Propaganda, and Misinformation: Learning to Critically Evaluate Media Sources.: Infographic: Spot Fake News. (n.d.). Retrieved from https://guides.library.cornell.edu/evaluate_news/infographic
- Graham, D. (2019, June 12). Some Real News About Fake News. Retrieved from <https://www.theatlantic.com/ideas/archive/2019/06/fake-news-republicans-democrats/591211/>
- McCarthy, N., & Richter, F. (2016, December 09). Infographic: Most Americans Believe Fake News Headlines. Retrieved from <https://www.statista.com/chart/7153/most-americans-believe-fake-news-headlines/>
- McClure, L. (2017, January 23). How to tell fake news from real news. Retrieved from <https://blog.ed.ted.com/2017/01/12/how-to-tell-fake-news-from-real-news/>
- Northern Essex Community College. (n.d.). Fake News vs. Real News: Tips for Evaluating Information. Retrieved from <https://library.nwacc.edu/fakenews/evaluating>
- Pierce College. (2020). FAKE NEWS vs. REAL NEWS: How to Determine the Reliability of Sources: Fake News. Retrieved from <https://library.piercecollege.edu/c.php?g=598055>
- University of New Hampshire. (n.d.). Fake News, Misleading Information, and Evaluating Sources: Problem. Retrieved from <https://libraryguides.unh.edu/fakenews>