Fake News Classification

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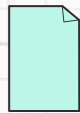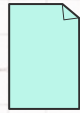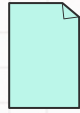Exploratory Analysis

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What is Fake News?

The term 'Fake News' is used to refer to news which is false or presents misleading information.

It's purpose is often to discredit public / political figures or make money through ad revenue.
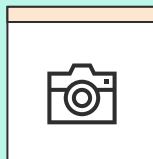
Security Goals & Fake News

Availability

Fake news is widely available online and through social media

Integrity

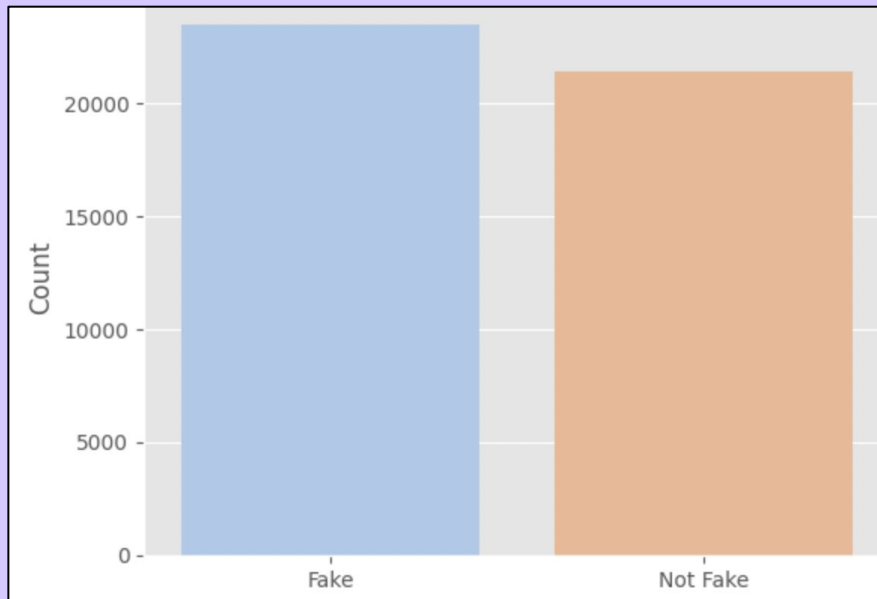Quotes and facts changed without permission

Accountability

Authors of fake news are often not held accountable for presenting false info
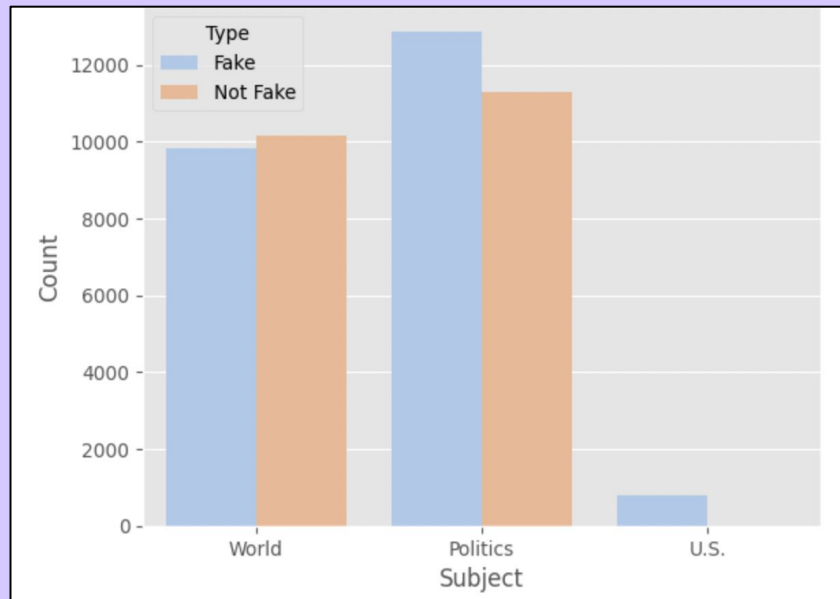
Exploratory Analysis
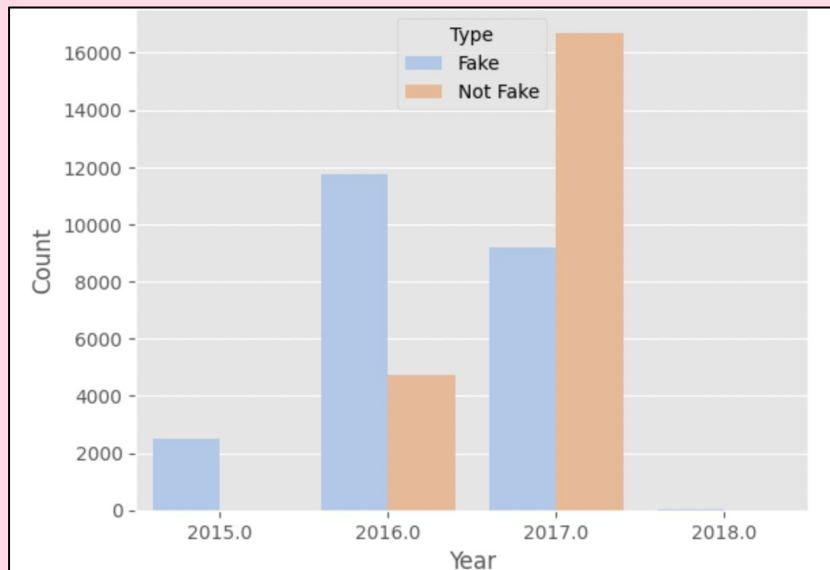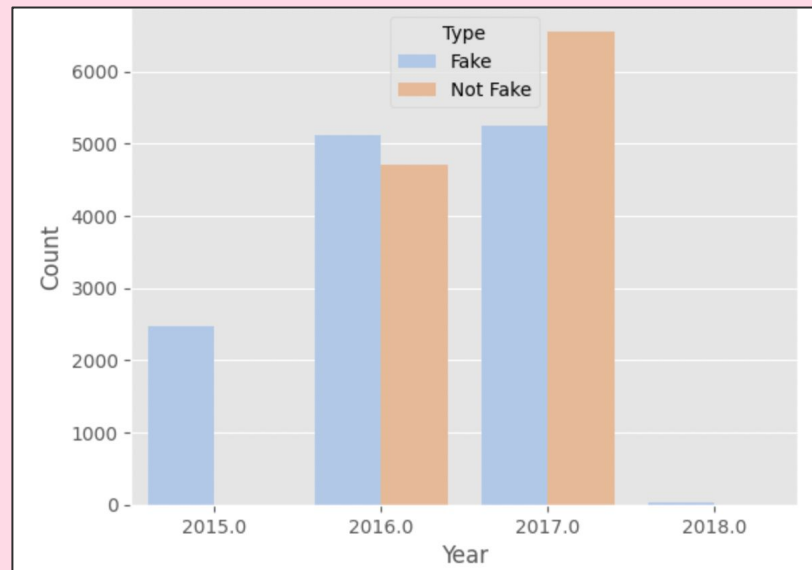
Percent of Fake News in Dataset

News by Subject

Exploratory Analysis Cont.

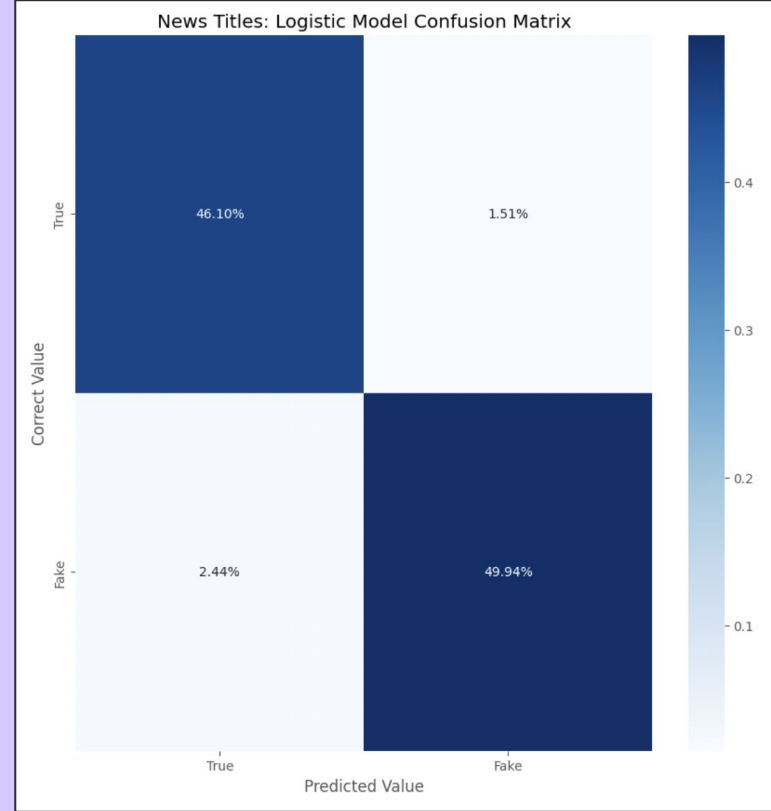Percent of Fake News in Dataset

Percent of Fake News in Dataset

News Titles: Logistic Model Confusion Matrix

Logistic Model 1

Article Titles

Accuracy: 96%

Logistic Model 2

Article Content

Accuracy: 99%

News Content: Logistic Model Confusion Matrix

	True	Fake
True	47.48%	0.13%
Fake	0.18%	52.20%

Correct Value (y-axis) / Predicted Value (x-axis)

Word Frequency Analysis

Top 15 Words in Fake News Titles
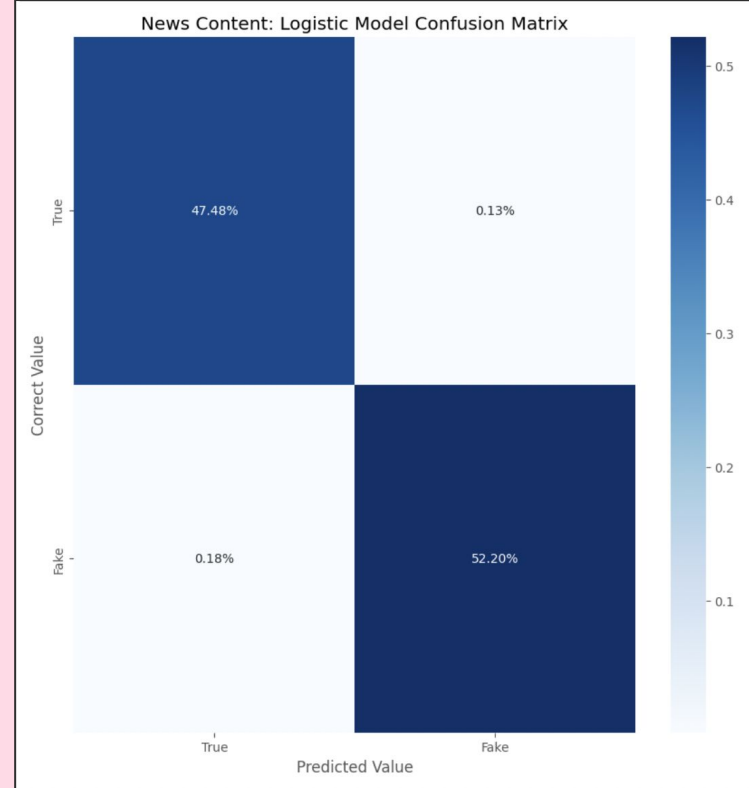
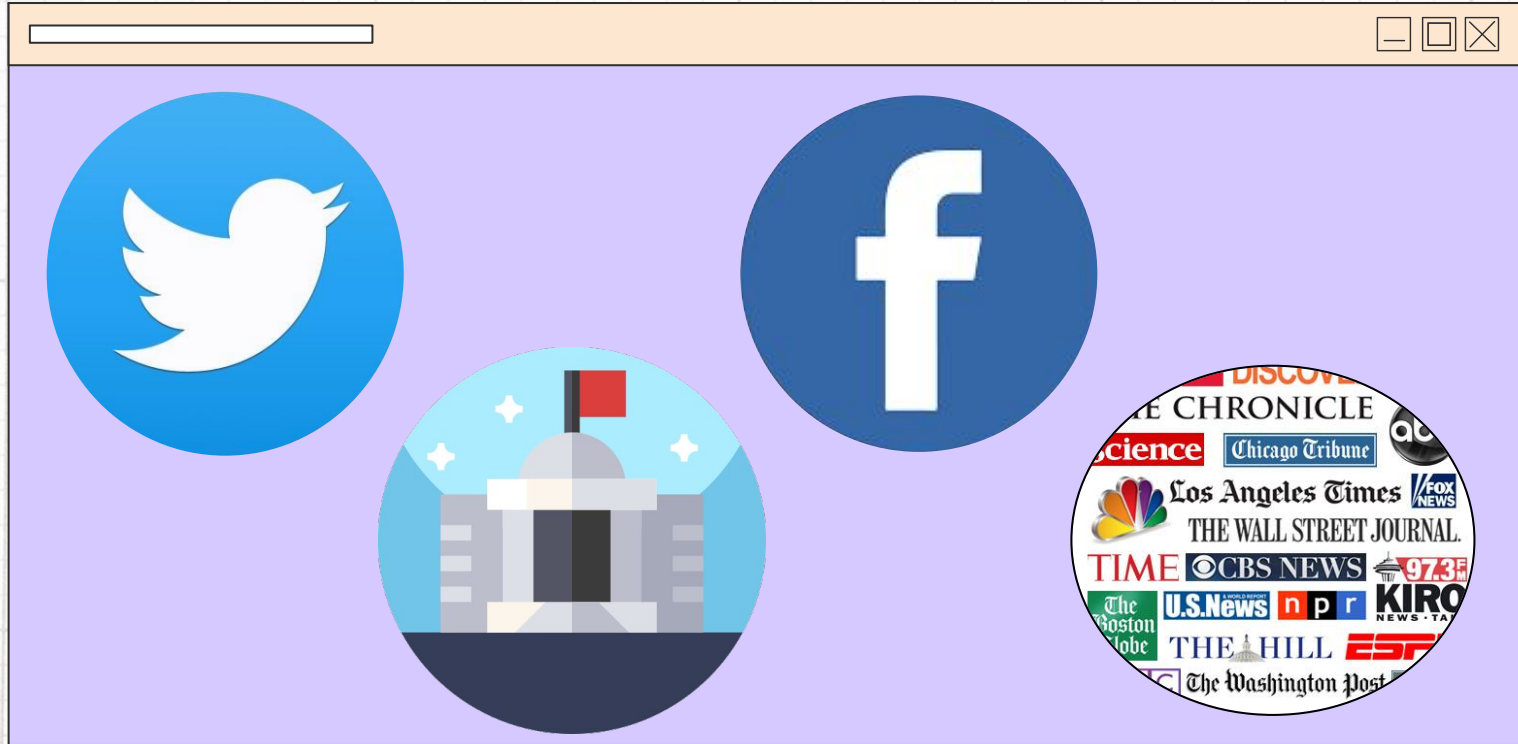Top 15 Words in True News Titles
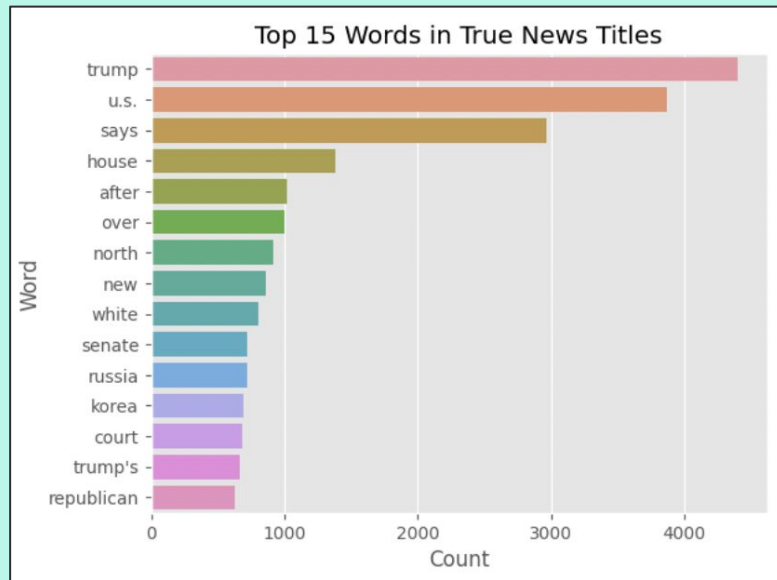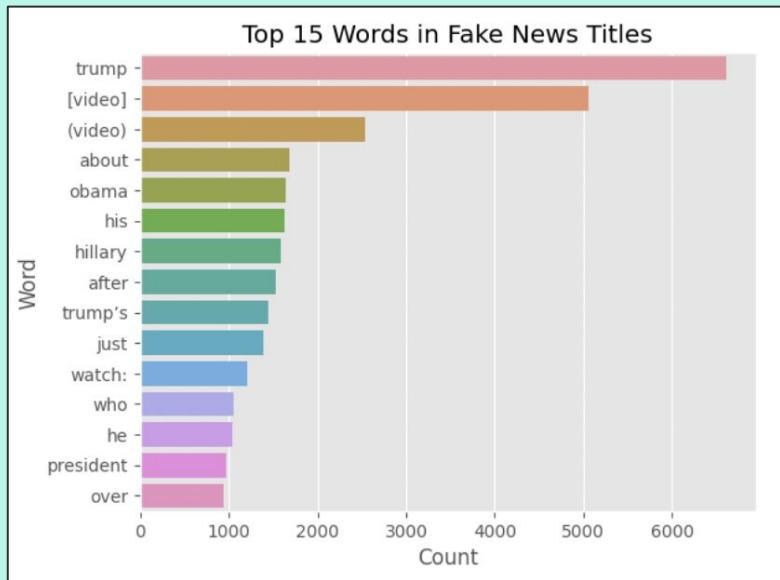
Use Cases for Security & Privacy Today

Resources

- Link to Dataset:
  https://www.kaggle.com/code/maxcohen31/nlp-fake-news-detection-for-beginners/data

- Link to Code Referenced for Logistic Model:
  https://www.kaggle.com/code/paramarthasengupta/fake-news-detector-eda-prediction-99

- Link to Code Referenced for Analysis of Word Frequencies:
  https://www.kaggle.com/code/sreshta140/is-it-authentic-or-not

Questions?