

Fake News Detection

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12-03-2019

Outline

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Problem Definition

- ▶ Develop a machine learning program to identify whether a news article is fake or true.
- ▶ We are using LIAR dataset for training the logistic regression model and NewsAPI to scrap the recent news to increase the accuracy of prediction program.

- ▶ Fake news detection on social media has recently attracted tremendous attention.
- ▶ The basic counter measure of comparing websites against a list of labeled fake news sources is inflexible, and so a machine learning approach is desirable.
- ▶ Our project aims to use logistic regression model to predict the behaviour of the news and web scrapping to increase the accuracy of predicting fakeness of recent local news.

- ▶ [1] LIAR is the best public dataset available which contains global news.
- ▶ [2] Logistic Regression Model outperformed all other models available with LIAR dataset

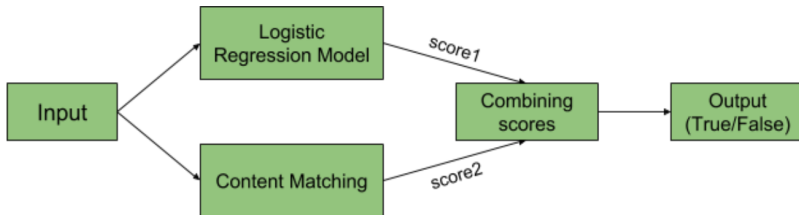


Figure 1: Design

- ▶ The input news is entered through an UI.
- ▶ The logistic regression model will predict a score by evaluating the behaviour of the news.
- ▶ Content matching will search for a match in the recent news dataset and provide a normalized score.
- ▶ Both scores are combined and final result (true/false) is displayed.

Gantt Chart

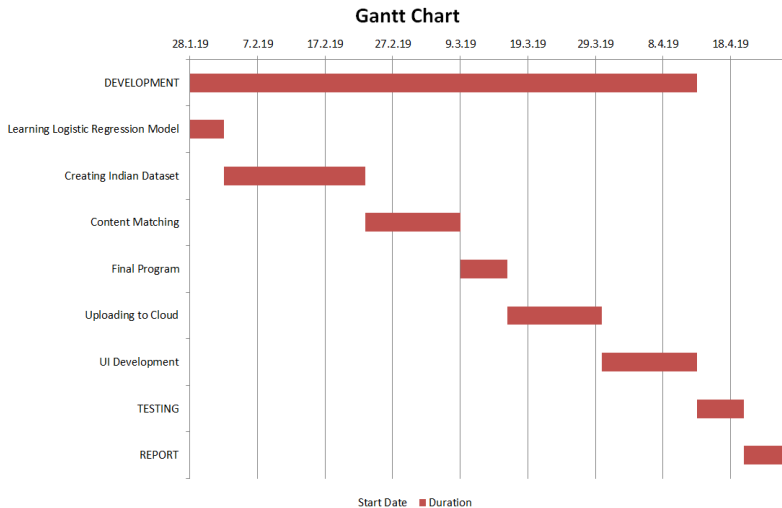


Figure 2: Gantt Chart

Experimental Setup

HARDWARE

- ▶ Windows OS - 8GB RAM and 500TB HDD.

SOFTWARE

- ▶ Jupyter Notebook
- ▶ Python
- ▶ Cloud Server

INPUT

- ▶ News headline API

OUTPUT

- ▶ Classification - either TRUE or FALSE

Conclusion

- ▶ Usual machine learning methods have different accuracy according to the region of news.
- ▶ Since we have added content matching using Indian news, the accuracy had increased more than the common method.

FUTURE WORK:

- ▶ Future work is creating a 6 month news dataset and a more optimized search method.

- [1] Wang, William Yang. "Liar, Liar Pants on Fire": A New Benchmark Dataset for Fake News Detection." *ACL (2017)*.
- [2] <https://github.com/nishitpatel01>