Fake News

Submitted By

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**INTRODUCTION**

* Business Problem Framing
* Fake news has become one of the biggest problems of our age. It has serious impact on our online as well as offline discourse. One can even go as far as saying that, to date, fake news poses a clear and present danger to western democracy and stability of the society.
* Conceptual Background of the Domain Problem

Machine Learning helps to find out the fake news and by which we can train a model to control or restrict the abuse.

* Review of Literature

The dataset had no NULL values, cleaned the data, carried out different methods to train the model.

**Analytical Problem Framing**

* Identification of possible problem-solving approaches Gaussian Naïve Bayes, Bernoulli Naïve Bayes, MLPClassifier, Random Forest Classifier.
* Data Sources and their formats
* There were no null values in the dataset.
* The dataset was not clean
* For some features, there may be values which might not be realistic. You may have to observe them and treat them with a suitable explanation.
* You might come across outliers in some features which you need to handle as per your understanding. Keep in mind that data is expensive, and we cannot lose more than 7-8% of the data.
* Data Preprocessing Done
* **Checking the size of the dataset**
* **Checking the summary statistics of the dataset**
* **Checking the data types and null values**
* **Dropping columns which aren’t important**
* **Converting categorical columns using dummy method.**
* Hardware and Software Requirements and Tools Used

Python, Pandas, nltk,Matplotlib, sklearn Gaussian Naïve Bayes, Bernoulli Naïve Bayes, MLPClassifier, Random Forest Classifier.

**Model/s Development and Evaluation**

* Identification of possible problem-solving approaches (methods)

Gaussian Naïve Bayes, Bernoulli Naïve Bayes, MLPClassifier, Random Forest Classifier.

Run and evaluate selected models

* Gaussian Naïve Bayes, Bernoulli Naïve Bayes, MLPClassifier, Random Forest Classifier.

Visualizations

Matplotlib, nltk

* Interpretation of the Results
* Carried out Analysis as well as visualization of the Dataset, treated imbalanced dataand then, trained the model using Gaussian Naïve Bayes, Bernoulli Naïve Bayes, MLPClassifier, Random Forest Classifier, model predicted with different accuracy for every model, out of all the models, Random Forest, have achieved with 99% accuracy rate.

**CONCLUSION**

* Data exploration, cleaning, visualization is the basic steps, inconsistent data was identified and treated. And then, trained the model using Gaussian Naïve Bayes, Bernoulli Naïve Bayes, MLPClassifier, Random Forest Classifier., model predicted with different accuracy for every model, out of all the models, Random Forest has achieved with 99% accuracy rate.