

#### Parshvanath Charitable Trust's

# A. P. SHAH INSTITUTE OF TECHNOLOGY, THANE

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**Department of Information Technology** 



# A Web Framework to Predict Fake News Using ML

Group No: 13
Jaagrut Shah 19204002
Jigar Desai 19204003
Yash Jain 19204013

Guided by: Prof. Apeksha Mohite Prof. Geetanjali Kalme

#### **Contents**

- Introduction
- Objectives
- Problem Definition
- Technological Stack
- Review Suggestions (Given in Last meeting)
- Proposed System Architecture/Working
- Prototype Design Demonstration
- Implementation Status
- Status of Paper Draft & Targeted Conference
- References

#### Introduction

- Problem Identified:
  - The easy access and exponential growth of the information available on social media networks has made it intricate to distinguish between false and true information.
  - The easy dissemination of information by way of sharing has added to exponential growth of its falsification.
- Solution Proposed :
  - With the help of ML Algorithms, and the data sets we would try to eliminate the fake news which is being spread and trying to alter the emotions of people reading news.

## **Objectives**

- To show the news relevancy and analysis to attain accuracy in anticipating real and dependable news.
- To work on this issue, a layered model is proposed, which fine-tunes the informational insight received from the data at each phase before attempting a prediction.
- To use a variety of Machine Learning approaches, achieve demonstrable success in the prediction of fake news and posts.
- To eliminate the propagation of false information on social media that may mislead users.
- To be able to give more and more accurate news on the screen.

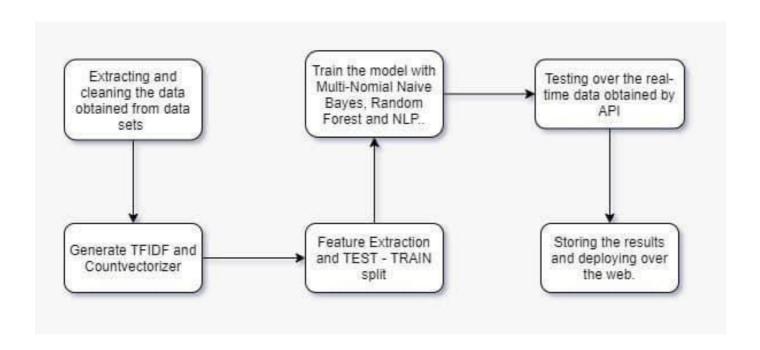
# **Technology Stack**

- •Software Requirements:
  - Python libraries
  - Front-end: Html5, Css3+ Bootstrap, JavaScript
  - Framework: Flask
  - Database: PostgreSQL, Monitor using PG Admin
  - Machine-Learning Classification models
  - OS Requirements: Windows XP or above
  - JavaScript supported browsers
- •Hardware Requirements:
  - Minimum 2GB Ram
  - Pentium / Intel i3 Processors or above

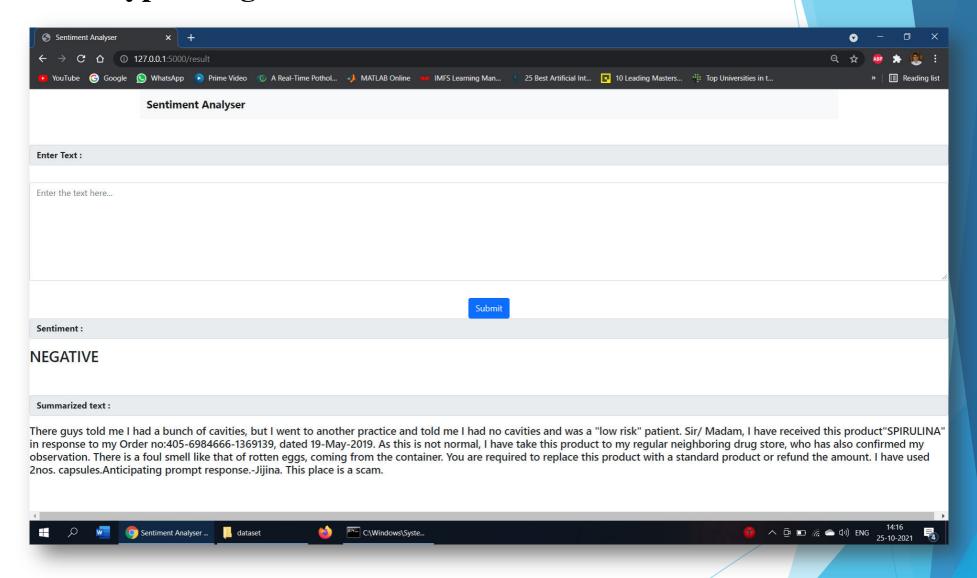
#### **Review Suggestions**

- Our product received positive feedback, although there were a few additions that are noted below:
  - 1. Including Sentiment Analysis in our project
  - 2. Adding a feedback mechanism for our website's visitors
- We intend to utilize natural language processing for sentiment analysis, and for the feedback system, we would record user information in a database together with the votes he offered to be fake or true. (This will be combined with machine prediction and sentiments with the news as well.)

## **Proposed System Architecture**



### **Prototype Design Demonstration**



#### **Implementation Status**

- Obtaining dataset from Kaggle and completing text pre-processing. (objective 1)
- Applying Classification Models to the data set and creating flask app to take manual input and output prediction. (objective 2)
- Creating flask app for summarization and sentiment analysis to take manual input and output prediction. (objective 3)
- Merging objective 2 and 3 form one flask app. (objective 4)

#### **Status of Paper Draft & Targeted Conference**

- Paper completed and sent to guide.
- Ready need to be approved by guide.
- Not submitted in conference.
- Conference Targeted: 2nd International Conference on Advanced computing Technologies in Engineering
- Deadline: April 27, 2022

#### References

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- Reis, J. C., Correia, A., Murai, F., Veloso, A., Benevenuto, F., & Cambria, E. (2019). "Supervised Learning for Fake News Detection". IEEE Intelligent Systems, 34(2), 76-81.
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Thank You...!!