CAPSTONE REVIEW-1

TWEET CLASSIFICATION AND TREND DETECTION USING NLP

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Outline:

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Abstract

- Social media often plays a crucial role in disseminating information to warn the public about health concerns. Twitter is most popular social media that allows its user to spread and share information.
- They publish these topics on the list called “Trending Topics”. It show what is happening in the world and what people's opinions are about it. In this project, proposes a plan to develop a novel framework for topic sentiment trend detection and prediction in social media.

Introduction

- In social media, millions of active users express their opinions and interact with each other daily. Such users' content in the form of posts or tweets provides a vast amount of useful information if analyzed carefully.
- Therefore, the data streamed from social media such as Twitter, Facebook, or Instagram is so precious for researchers to perceive the users' social behavior through NLP.
- A massive amount of user-generated online content is freely available to the real-time monitoring of public sentiment.

Project Description

- <u>This project has two objectives:</u>
- To apply Topic Trend Detection and Sentiment analysis to get insights on public opinion and news media over a period of time.
- Topic Prediction to understand what future concerns might be.
- The proposed framework is divided into two parts, topic trend detection and sentiment analysis. The purpose of this project is to find the impact a topic has on social media and classify accordingly. Also, to predict the impact on further related topics.

Merits

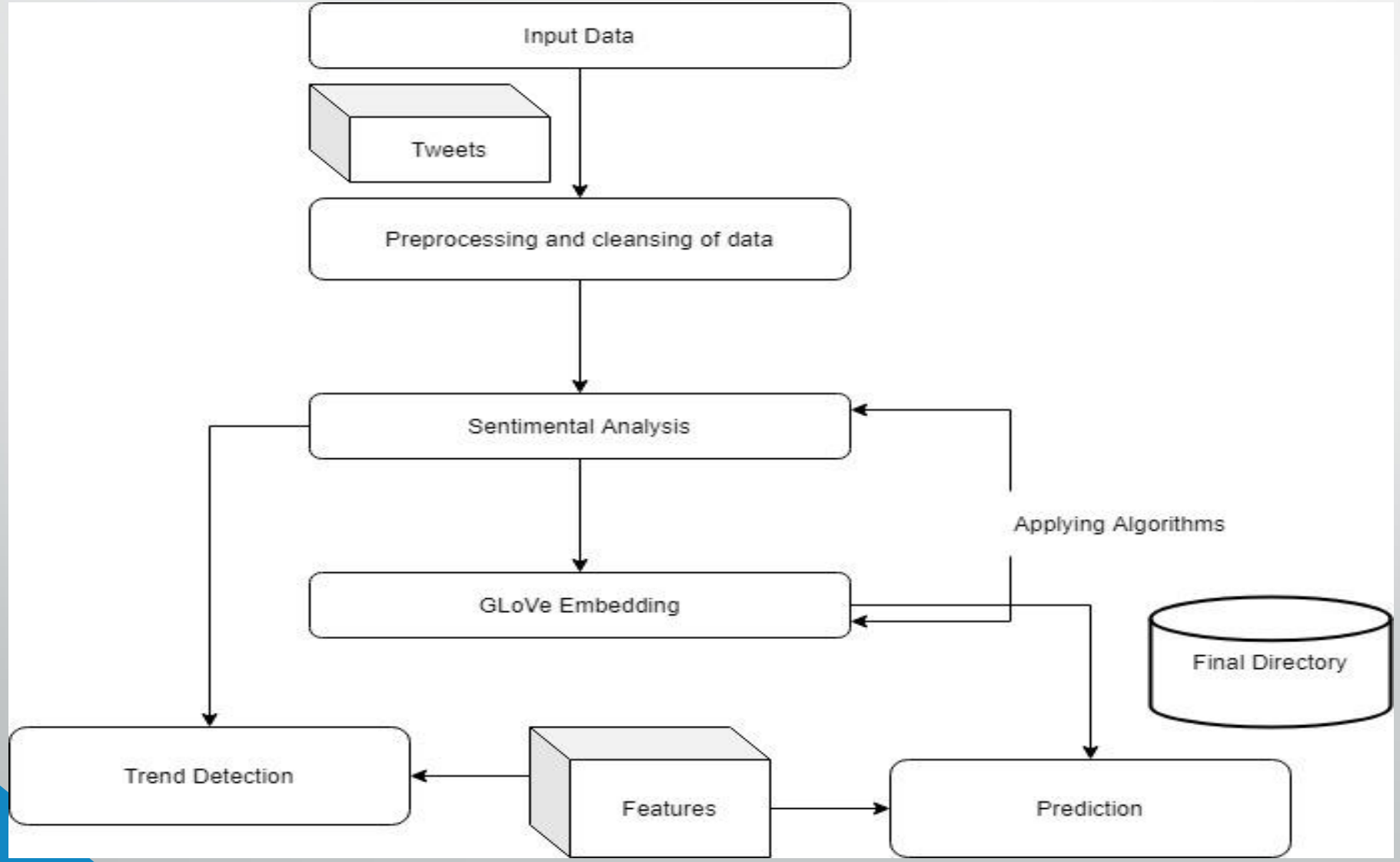
- Detailed and graphical analysis of trending topics(i.e. hashtags)
- Extent of trending topics (time frame).
- Detecting a newly initiated trend.
- Prediction of topic outreach based on past data.
- Can help companies understand how people are talking about their brand.
- It helps companies detect target demographics after initial feedback.

Methodology

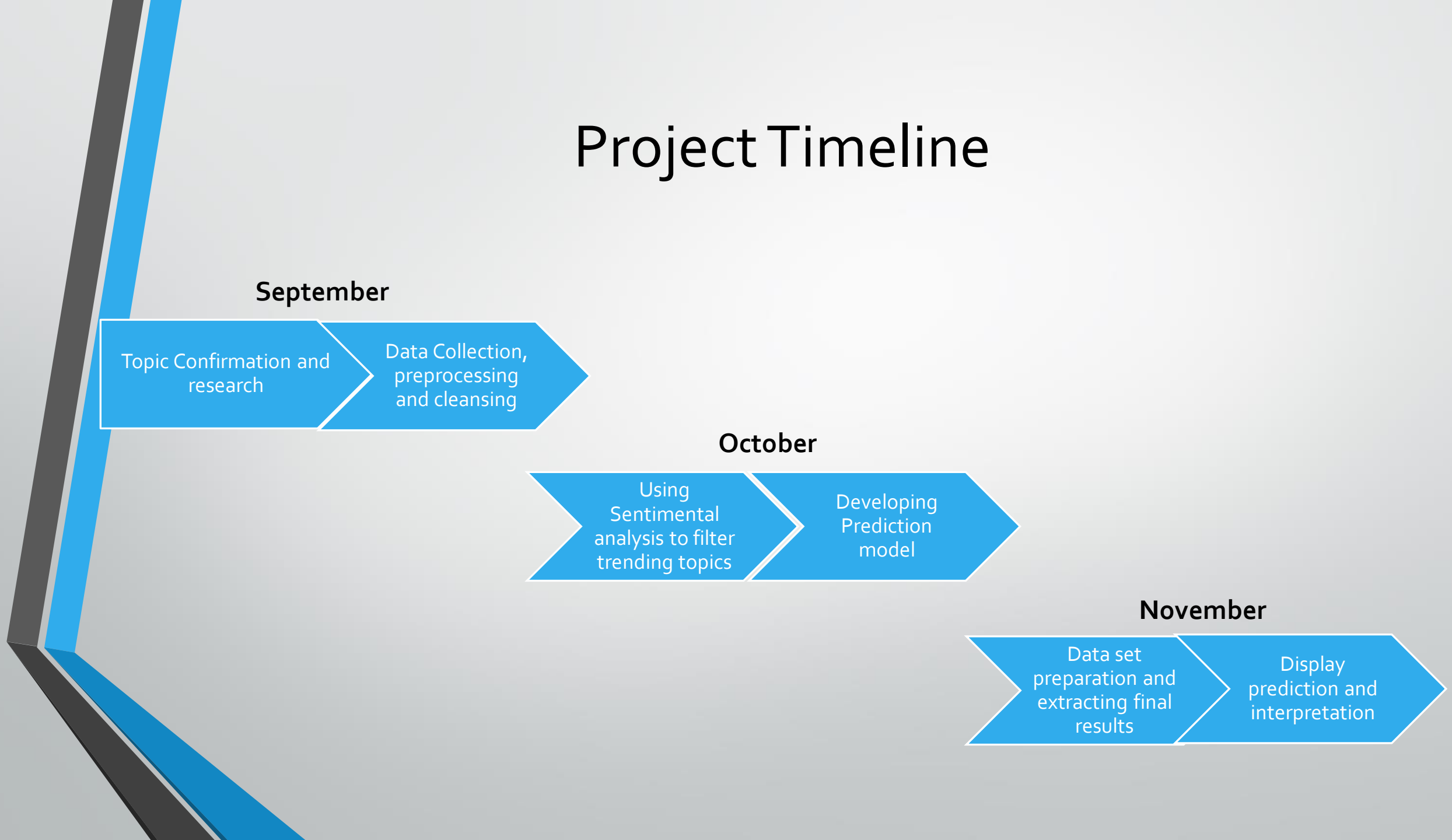
- Collecting high volumes of data to create an efficient prediction model
- Pre-processing data and cleansing of data.
- Detecting topic trends and applying sentimental analysis
- Developing a prediction model using **GLoVe Embedding***
- Data-set preparation and developing and deploying **Long short-term memory***
- Displaying result interpretations and prediction.

*subjected to change

Flow Chart


Input Data
Tweets
Preprocessing and cleansing of data
Sentimental Analysis
Applying Algorithms
GLoVe Embedding
Final Directory
Trend Detection
Features
Prediction

Project Timeline



References

- Implicit Entity Recognition, Classification and Linking in Tweets

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- Twitter Trend Extraction: A Graph-based Approach for Tweet and Hashtag Ranking, Utilizing No-Hashtag Tweets by Zahra Majdabadi, Behnam Sabeti, Preni Golazizian, Seyed Arad Ashrafi Asli, Omid Momenzadeh, reza fahmi https://www.aclweb.org/anthology/2020.lrec-1.762

Thank You