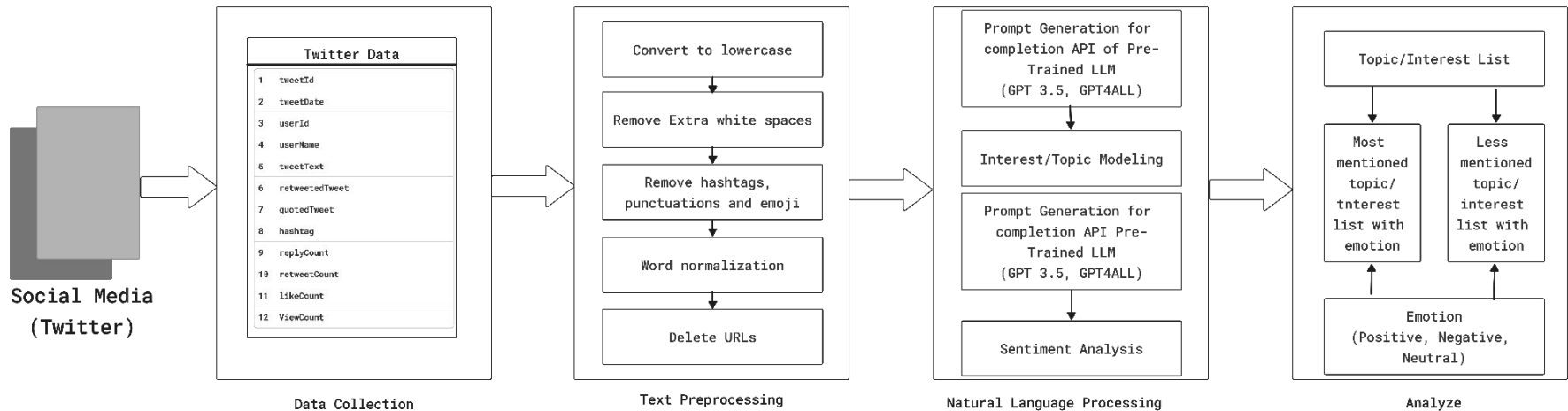# Sentiment and Interest Detection in Social Media using GPT-based Large Language Models

Md Abdullah Al Asad, Professor Dr. Roy George
Department of Cyber-Physical Systems
Clark Atlanta University
Atlanta, Georgia, USA

- This paper presents a comprehensive investigation into sentiment analysis and interest/topic detection using cutting-edge language models,ChatGPT3.5 and gpt4All.
- The methodology encompasses data collection, meticulous text pre-processing, innovative prompt design, and the exploration of zero-shot, one-shot, and few-shot learning techniques.

	Twitter Data
1	tweetId
2	tweetDate
3	userId
4	userName
5	tweetText
6	retweetedTweet
7	quotedTweet
8	hashtag
9	replyCount
10	retweetCount
11	likeCount
12	ViewCount

Social Media
(Twitter)

Data Collection

Convert to lowercase

Remove Extra white spaces

Remove hashtags, punctuations and emoji

Word normalization

Delete URLs

Text Preprocessing

Prompt Generation for completion API of Pre-Trained LLM (GPT 3.5, GPT4ALL)

Interest/Topic Modeling

Prompt Generation for completion API Pre-Trained LLM (GPT 3.5, GPT4ALL)

Sentiment Analysis

Natural Language Processing

Topic/Interest List

Most mentioned topic/ tnterest list with emotion

Less mentioned topic/ interest list with emotion

Emotion
(Positive, Negative, Neutral)

Analyze

- Through a detailed comparative analysis, we unveil the nuances of model performance in sentiment analysis and interest/topic detection and show the result in a web portal.