**Individual Report**

**Member name:**[Krupaben Kothadia](mailto:kkothadi@asu.edu)

**Evaluated by:**[Gautham Vijayaraj](mailto:gvijaya6@asu.edu)

**Date: 09/03/2023**

**Tasks Assigned:**

* Identifying 5 research papers on Data Preprocessing and NLP techniques to produce robust dataset for detecting suspicious activities on social media.
* Preparing an individual in-depth report.
* Preparing an individual progress report.
* Preparing Project Plan.
* Preparing Gantt Chart.
* Evaluating Gautham’s individual progress report and in-depth report.
* Evaluating and approving Weekly Report.
* Approving 4 team members in-depth reports.
* Organizing group meetings.
* Assigning tasks to team members through “Work\_Distribution\_Draft”: <https://docs.google.com/document/d/190WORssUQY3avfj74LGWNBMhTla2pCVrCwtnhcWRNTM/edit>
* Providing direction in preparing Weekly Report, Project plan and Gantt chart.
* Approving 4 team members' research domain and their research papers.
* Organizing google drive.

**Summary:**

* Identified 5 research papers based on the research domain that I will be working on for this group project. These 5 research papers focus on different techniques for data preprocessing and/or NLP techniques used to create a robust dataset for detecting suspicious activities on social media.
* An in-depth study has been conducted on “[An Integrated approach for Malicious Tweets detection using NLP](https://drive.google.com/drive/u/3/folders/1T7fs2iwRVNtzAw-9zUeapSM3Ha7uB5_H)”
* Data Preprocessing:
  + The study collected publicly available tweets using Twitter's APIs, which included pre-classified tweets as spam or not. In cases of misclassification, the authors reevaluated tweets linked to the same URLs.
  + Data was categorized into tweets with and without URLs, distinguishing non-spam from potential spam.
* NLP Processing:
  + Advanced Natural Language Processing (NLP) techniques were employed to process the textual content of tweets, including stop word removal and identifying semantic meanings among words.
  + The study used a divergence ratio between the semantics of text and the linked URL's content as a crucial feature for training a classification model, significantly improving tweet classification accuracy.

**Outcome:**

The paper presents cutting-edge data preparation and NLP methods for examining tweets while protecting privacy. Through Twitter's APIs, they acquired publicly accessible pre-categorized data, labeled and arranged it. NLP analyzed the text, which resulted in a language model capable of categorizing tweets as either spam or non-spam using text-URL divergence.

**References** *(with citation)*

[10] S. Gharge and M. K. Chavan, “An integrated approach for malicious tweets detection using NLP,” *International Conference on Inventive Communication and Computational Technologies,* Mar. 2017, doi: 10.1109/icicct.2017.7975235.

**Evaluation of Report  
  
Evaluation by:** [Gautham Vijayaraj](mailto:gvijaya6@asu.edu) **Date: 09/03/2023**

**Is the weekly member report complete with all the major result(s) of the paper(s)? If not, provide as many examples of the major result(s) missing in the written report as possible. (in bullet form). [within 100 words]**

* Yes, the report is complete with all major results of the paper.
* Major tasks for this week have been assigned and completed.
* In-Depth report of a reference paper had been completed

**Is each section of the guidelines sufficiently completed? If not, point out what is missing. [Normally within 40 words].**

Yes, each section of the guidelines has been sufficiently completed. The Tasks section contains all the tasks assigned, the Summary section consists of the gist of the in-depth report.

**Is the quality of this version of the written report satisfactory? If not, then why not? [Normally within 40 words]**

Yes, the quality of this progress report is satisfactory.

**Approved by:** [Gautham Vijayaraj](mailto:gvijaya6@asu.edu) **Date:** 09/03/2023