**Individual Report**

**Member name: Justin Young**

**Evaluated by:** [Yeshwanth Reddy Chennur](mailto:ychennur@asu.edu)

**Date: Oct 23, 2023**

**Tasks Assigned:**

* Prepared individual progress report
* Evaluated another member’s individual report
* Reviewed not-so important research papers

**Summary:**

* I reviewed the not-so important paper “A Framework to Predict Social Crime through Twitter Tweets By Using Machine Learning”
* This paper aims to use machine learning methods on Twitter data to predict and prevent social media crimes.
* The proposed process has 3 modules:
  + Pre-processing of tweets
  + Generating a trained model
  + Making the prediction
* 150k tweets are collected categorically through the Streaming API for the dataset
* Machine learning models Multinomial Naïve Bayes, K-Nearest Neighbor, Support Vector Machine are compared for analysis.
  + Results conclude that the SVM model performed the best with an accuracy of 92%.
* This study concluded that their model performed well, but can be improved with more classes of social media crimes.

**Outcome:**

This week I reviewed the not-so important research paper “A Framework to Predict Social Crime through Twitter Tweets By Using Machine Learning”, and prepared and evaluated individual reports for this week.

**References** *(with citation)*

Z. Abbass, Z. Ali, M. Ali, B. Akbar and A. Saleem, "A Framework to Predict Social Crime through Twitter Tweets By Using Machine Learning," 2020 IEEE 14th International Conference on Semantic Computing (ICSC), San Diego, CA, USA, 2020, pp. 363-368, doi: 10.1109/ICSC.2020.00073.

**Evaluation of Report  
  
Evaluation by:** [Yeshwanth Reddy Chennur](mailto:ychennur@asu.edu)

**Date: Oct 23, 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.**

* It's true that the weekly member's report is extensive. It talks about a work titled "Predicting Social Crime through Twitter Tweets with Machine Learning." Using 150k classified tweets from the Streaming API, the three components of the paper—tweet preprocessing, model development, and prediction—are explained in depth. After three machine learning models—Multinomial Naïve Bayes, K-Nearest Neighbor, and Support Vector Machine—were examined, the findings showed that, with a 92% accuracy rate, the Support Vector Machine model worked the best. The report's conclusion acknowledges the model's effectiveness and makes suggestions for how to make it better, such including new social media crime categories. The report summarizes the main findings of the article.

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

* Yes, Each section of guidelines is sufficiently completed.

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

* Yes, The written report is satisfactory.

**Approved by:** [Krupaben Kothadia](mailto:kkothadi@asu.edu) **Date:** 10/23/2023