**Individual Report**

**Member name: Justin Young**

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

**Date: 10/09/2023**

**Tasks Assigned:.**

* Prepare and evaluate individual progress reports
* Reviewed 2 not-so important papers.

**Summary:**

* Evaluated another member’s individual progress report.
* Reviewed ‘A Multiple Feature Category Data Mining and Machine Learning Approach to Characterize and Detect Health Misinformation on Social Media’ from the not-so important papers list.
* This paper covers the use of classification models to detect health related misinformation on social media (specifically looking at Twitter).
* The study in this paper proposes a data mining approach to extract features from misinformation, and use classification models to more effectively detect misinformation.
* In this approach, features are extracted from tweets containing health (mis)information.
* This information is then formatted and input into support vector machines and random forest classifiers.
* The results of this study included a new approach to extracting features from tweets through data mining, and resulted in a process that detects health misinformation with an accuracy of >85%
* The second not-so important paper covered is ‘Profile Similarity Recognition in Online Social Network using Machine Learning Approach’
* This paper covers the threat potential of fake accounts on social media, and proposes a process to mitigate the issue.
* In this process, data from genuine and fake accounts are trained on a deep neural network model, a support vector machine and a random forest classifier model.
* The study concludes that the deep neural network model performed the most effectively with 96% accuracy.

**Outcome:**

This week I reviewed 2 not-so-important research papers relating to the use of machine learning models to mitigate particular threats on social media. These papers focused particularly on the performance of support vector machines and random forest classifiers.

**References:**

[1] L. Safarnejad, Q. Xu, Y. Ge and S. Chen, "A Multiple Feature Category Data Mining and Machine Learning Approach to Characterize and Detect Health Misinformation on Social Media," in IEEE Internet Computing, vol. 25, no. 5, pp. 43-51, 1 Sept.-Oct. 2021, doi: 10.1109/MIC.2021.3063257.

[2] T.R Soumya, S.Solai Manohar, N.Bala Sundara Ganapathy, Leema Nelson, A. Mohan, M.Thurai Pandian. "Profile Similarity Recognition in Online Social Network using Machine Learning Approach" in International Conference on Inventive Research in Computing Applications (ICIRCA), 29 December 2022, Pages 805-809. ISSN 22473631 doi:10.1109/ICIRCA54612.2022.9985683.

**Evaluation of Report  
  
Evaluation by: Yeshwanth Reddy Chennur  
Date: Oct 9, 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 the major results.

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

* Yes, each section's guidelines are sufficiently detailed.

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

* Yes, The quality of the report is satisfactory.

**Approved by:** [Krupaben Kothadia](mailto:kkothadi@asu.edu) **Date:** 10/09/2023