## 

**Individual Report**

**Member name:** [Yeshwanth Reddy Chennur](mailto:ychennur@asu.edu)

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

**Date: Oct 16, 2023**

**Tasks Assigned:**

* Preparing Individual Progress Report.
* Preparing Weekly Report for the current week.
* Evaluating [Justin Young](mailto:jtyoun15@asu.edu)Report.

**Summary:**

* Prepared the weekly report for this week
* Individual reports are completed for this week.
* Completed reading a NOT so important paper titled "A survey of data mining and social network analysis based anomaly detection techniques."
* In the initial section, the authors highlight the growing significance of anomaly detection across a range of industries, including cybersecurity, fraud detection, and healthcare.
* They stress the necessity for reliable methods to spot odd patterns or outliers in huge datasets. The research focuses on two well-known methods: social network analysis and data mining.
* The data mining-based techniques that are covered use a variety of algorithms, such as association rule mining, clustering, and classification.
* These techniques seek to spot patterns that differ from the norm, potentially signaling anomalies.
* The authors examine particular algorithms, such as k-means clustering, decision trees, and association rule mining, and offer details on their benefits and uses.
* The paper analyzes how anomalies might be found by analyzing the structure and behavior of networks in the context of social network research.
* It contains metrics that are essential for spotting odd nodes or behaviors inside a network, such as centrality measures, community discovery, and impact propagation.
* The authors also cover the integration of social network analysis and data mining techniques for more thorough anomaly detection.
* In order to improve the precision and efficiency of anomaly detection systems, this hybrid technique makes use of the advantages of both methodologies.

**Outcome:**

* The study provides a comprehensive review of anomaly detection methods, highlighting the benefits and drawbacks of approaches based on data mining and social network research. The combination of these approaches offers a viable direction for additional study in this important area. For researchers and practitioners interested in anomaly detection**.**

**References:**

[1] Ravneet Kaur, Sarbjeet Singh. "A survey of data mining and social network analysis based anomaly detection techniques." Egyptian Informatics Journal, Volume 17, Issue 2, 2016, Pages 199-216. ISSN 1110-8665. doi: 10.1016/j.eij.2015.11.004.

**Evaluation of Report  
  
Evaluation by:** [Avani Mundra](mailto:amudra@asu.edu) **Date: Oct 16, 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 weekly report is completed with all the major results included in the review of the paper
* The report highlights all the necessary tasks performed this week. It describes the detailed summary of the issue discussed in the paper and the methodology adopted to resolve it.

**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 is sufficiently completed and covers all the major findings and nuances of the paper.

**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 written report is satisfactory including detailed descriptions of tasks assigned, summary of paper and outcome of the research paper.

**Approved by:** [Gautham Vijayaraj](mailto:gvijaya6@asu.edu) **Date: Oct 16, 2023**