**Individual In-depth Report**

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

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

**Date:** Oct 2, 2023

**Tasks Assigned:**

* Reviewed the paper titled “Hybrid Deep Learning-based Anomaly Detection Scheme for Suspicious Flow Detection in SDN: A Social Multimedia Perspective”. and wrote its in-depth report”.

**Summary:**

* To identify suspect network traffic, the suggested method makes use of a hybrid deep learning system. To improve anomaly detection capabilities, it blends the benefits of deep learning approaches with SDN's programmability.
* The authors place special emphasis on the difficulties brought on by social multimedia apps, which result in a variety of dynamic traffic patterns.
* To process the network traffic data, the system uses a deep learning model, perhaps a blend of different neural network architectures. By doing this, it picks up on the innate patterns and traits of typical network behavior that are particular to social multimedia applications.
* This makes it possible for the system to recognize inconsistencies that could be signs of security threats or anomalies.
* The study shows how this hybrid deep learning technique dramatically improves the ability of SDNs to identify suspicious flows. The findings probably show a significant advancement over conventional anomaly identification techniques.
* In the context of social multimedia, where traditional approaches may be ineffective due to the unique traffic patterns and behaviors associated with these applications, the article provides insightful information for protecting SDNs.
* In the end, the work contributes to network security by offering a specialized method for identifying suspicious activity in SDN environments, especially in the context of social multimedia applications.

**Outcome:**

* The Paper provides a hybrid deep learning-based technique for detecting suspicious flows in SDN, with better anomaly detection performance in social multimedia applications.

**References:**

[1] S. Garg, K. Kaur, N. Kumar and J. J. P. C. Rodrigues, "Hybrid Deep-Learning-Based Anomaly Detection Scheme for Suspicious Flow Detection in SDN: A Social Multimedia Perspective," in IEEE Transactions on Multimedia, vol. 21, no. 3, pp. 566-578, March 2019, doi: 10.1109/TMM.2019.2893549.

**Evaluation of Report**

**Evaluation summary with justification.**

The report effectively summarizes the findings of the research paper. It discusses the methods used to identify suspicious network traffic and improves upon conventional approaches using deep learning techniques. The problem statement, methodology and results have been mentioned clearly.

**The quality of the major result(s) with justification.**  
The major results of the paper have been outlined in detail.

**The usefulness of the paper to the overall project.**   
The paper is highly relevant to the overall project and discusses information assurance in social media.

**Other comments**

No comment

**Evaluation Approval  
  
Evaluation by:** [Avani Mundra](mailto:amudra@asu.edu) **Date:** Oct 2, 2023

**Is the written report of the in-depth study 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). [Normally within 100 words]**

* Yes, all major results of the paper are covered.
* The in-depth study report is complete.

**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.

**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 written report is satisfactory.

**Approval.  
  
Approved by:** [Gautham Vijayaraj](mailto:gvijaya6@asu.edu) **Date: 10/2/2023  
  
Is the quality of this written in-depth study report and Evaluation report satisfactory? If not, then why not? (limit: 40 words)**

The quality of this written in-depth study report and Evaluation report is satisfactory. The evaluation report signifies correct evaluation and the report itself justifies the project topic.