**Individual Report**

**Member name:**[Avani Mundra](mailto:amudra@asu.edu)

**Evaluated by:**

**Date: 10/23/2023**

**Tasks Assigned:**

* Reviewed a not so important research paper ‘TargetVue: Visual Analysis of Anomalous User Behaviors in Online Communication Systems’.
* Added summary to [6] paper in [Summary\_Statement\_Not\_So\_Important\_Papers](https://docs.google.com/document/d/1QmxaOqG8rONc0v80Qa2wFGUMXmtyd_5nVvCeJUYJvuM/edit?usp=sharing)
* Evaluated [Yeshwanth Reddy Chennur](mailto:ychennur@asu.edu)’s individual progress report for the present week.
* Prepared Weekly Report for the present week

**Summary:**

* The research paper ‘TargetVue: Visual Analysis of Anomalous User Behaviors in Online Communication Systems’ introduces "TargetVue," a visual analysis system designed to detect anomalous users in online communication systems (e.g., email and social media platforms)
* Anomaly detection is crucial for identifying potential threats to society, but it is challenging due to the difficulty of obtaining accurate ground truth data for model training and evaluation.
* One of the primary challenges in anomaly detection is the need for human judgment to fine-tune the system's performance based on automated analysis results.TargetVue addresses this challenge by providing a novel visualization approach to help users understand and make confident judgments about anomalies while exploring data in its context.
* The system uses ego-centric glyphs to visually summarize a user's communication behaviors, including activities, features, and social interactions.These glyphs are designed to be simple and clean, making it easy to compare behaviors among different users.The glyphs are arranged on a triangle grid, facilitating the comparison of users and capturing similarities among them.
* TargetVue has been applied in various scenarios, including a social bot detection challenge using Twitter data and a case study based on email records.
* The paper mentions that the system's usability has been evaluated through interviews with domain experts, and the feedback received has been positive.

**Outcome:**

* The conclusion of the paper discusses potential future work, including tuning the anomaly detection model based on user feedback and integrating advanced methods based on active learning techniques.The authors also plan to conduct a formal user study to further evaluate the usability and effectiveness of the TargetVue system.

**References:**

[6] N. Cao, C. Shi, S. Lin, J. Lu, Y. Lin, C. Lin, “TargetVue: Visual Analysis of Anomalous User Behaviors in Online Communication Systems”, in IEEE Transactions on Visualization and Computer Graphics, vol. 22, no. 1, pp. 280-289, 11 August 2015, doi: 10.1109/TVCG.2015.2467196.

**Evaluation of Report  
  
Evaluation by:** [Rahul Nayak](mailto:rrnayak@asu.edu) **Date: 10/23/2023**

**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. (in bullet form). [within 100 words]**

* The weekly report is finished, containing the abstract and significant findings from the research paper reviewed this week
* Yes, the weekly member report is complete with all major results of the paper, highlighting TargetVue's role in anomaly detection for online communication systems and its positive usability feedback.

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

Yes, each section of the report 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 the report is Satisfactory.

**Approved by:** [Krupaben Kothadia](mailto:kkothadi@asu.edu)

**Date: 10/23/2023**