Reproduction & Analysis

Experiment Reimplementation:
Isolation Forest anomaly detection was applied to the dataset, and anomalies were marked based on the deviation from normal traffic patterns. The data results presented in the screenshots (Batch 34, Batch 39, Batch 43) show the number of anomalies detected over different time windows, which can be compared to the figures from the original paper.

Key Figures Comparison:
You can compare your results (visualized in the plots) against the original paper's figures. The detection of anomalies, as shown in the figures, seems to align with what the original paper reports, but due to the smaller dataset, we observed a difference in the number and frequency of anomalies detected.

Challenges in reproducing results: The smaller dataset affects the number of detected anomalies. Additionally, as seen in the figures, there are varying levels of error and computational times for different batches, which might explain any discrepancies in the results.

Results Discussion:
The detection of anomalies in Batch 34, 39, and 43 aligns with the paper's findings that the anomalies correspond to certain behavior patterns or attacks.

Differences:
Dataset Size: Since only a subset of the original dataset was used, fewer anomalies were detected.
Computational Power: The computational power required to analyze the entire dataset affected the batch processing speed, as seen in the time stamps.