**LITERATURE REVIEW**

To overcome the instability issue, in this paper, we propose

LogRobust, a novel log-based anomaly detection approach, which

can achieve accurate and robust anomaly detection on real-world,

ever-changing and noisy log data. Unlike the existing approaches,

LogRobust does not rely on the simple occurrence information of

log events. Instead, it transforms each log event into a semantic vector

of the fixed dimension. Semantic vectors are capable of capturing

the semantic information embedded in log events. Through semantic

understanding, this representation method is able to identify

and handle new but similar log events that emerge from evolving

logging statements and parsing errors. Then, taking the sequence

of semantic vector as input, an attention-based Bidirectional

Long-Short-Term Memory Neural Network (Bi-LSTM) classification

model is applied to detect the anomalies. The attention-based

Bi-LSTM model has the ability to capture the contextual information

in the log sequences and automatically learn the importance

of different log events. Thus, it is robust to the variations in the

sequences. **(Robust Log-Based Anomaly Detection on Unstable Log Data)**(Zhang et al., 2019)