Temporal trends analysis for dengue outbreak and network threats severity prediction accuracy improvement

ABSTRACT

Time series analysis is one of the major techniques in capturing trends and pattern of the occurrence for future forecasting. Existing but scarce work have developed temporal-based techniques which target to either predict movement (increase or decrease) or quantify the possibility of the predicted event to happen. Man of these techniques focus on the values of the time series attribute but there is no available work on dengue or intrusion logs that focus on temporal trend analysis based on temporal relations mining. In this work the proposed technique utilize the temporal trends analysis of the observational attributes towards the pattern of the target's attribute values. In this work, we propose a new temporal trends analysis approach that uses temporal relation mining in forecasting dengue outbreak and cyber intrusion.We leverage the temporal abstractions and temporal logic to define patterns with the goal to optimize prediction accuracy. From the experiment conducted, the results showed that the proposed approach has better prediction as compared to the baseline.