

## ABSTRACT

Anomaly detection has density based approach to detect intrusions. Part of density based approach is graph based which has ODIN (Outlier Detection using Indegree Number) algorithm. This algorithm can be used to build intrusions detection system.

This final project will build an implementation of anomaly detection system to detect intrusions using ODIN. This algorithm will be implemented using MATLAB r2007a tool. This system is tested using network connection record which represented data in real.

The result shows that detection anomaly to indentify intrusions using ODIN algorithm, give the best result which is indicated by detection rate up to 100%, and 0% false positive rate for right  $K$  (neighbour) and  $T$  (threshold).

Keywords: *ODIN (Outlier Detection using Indegree Number), Intrusion, anomaly, T (Threshold), K (neighbour).*