Development of A Distributed Real-Time Anomaly Detection Platform

Motivation
In cyber security, we are dealing with tremendous amount of anomalous activities, such as botnets, malware, web attacks, and Email spams. With the dramatically increasing size of data generated by different processes, it is of central challenging of processing all those information in a real-time way, such that suspicious behaviours can be discovered before they conduct hazard to the systems. Developing a real-time anomaly detection platform is therefore extremely valuable for different contexts in cyber security, such as in web traffic, connected vehicles and so on.

Task Description
In this work you will be actively involved in designing and developing a real-time anomaly detection platform, which is highly scalable and flexible, that can be distributed and configured in various scenarios. You will be working with our core team together to build an interactive web-based application for anomaly detection, where advanced techniques like Machine Learning and Deep Learning are used. Besides, you will be responsible for data visualization and user interfaces of the front-end.

Requirements
- Strong programing skills in Javascript and Python, optional Java or Scala
- Experience in web frameworks, e.g., Django, Play, React
- Experience in data visualization, e.g., Bokeh, D3js
- Experience of building distributed web application is a strong plus
- Knowledge in Machine learning and data mining is a plus
- Knowledge in IT Security is a plus

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