Identify abnormal behavior (or threats) of users accessing organization’s network

Abstract:
Cisco Identity Service Engine (ISE) is responsible to authenticate and authorize users that login into an organization networks such as in universities for example (only students and/or staff can login the network with different privileges). Once some user access the network ISE collects various information about the user such as whether the user access the network from wireless connection or wired. The location of the user, the user IP address, the user MAC address, the OS type the user uses (iOS, Android, Windows etc.) and more.
Goals:

- Develop a prototype that will collect events from ISE in real time, normalize the information received in the events and classify them by different vectors.
- Develop a dynamic AI algorithm which will identify abnormal behavior for all users. For example: in case of a global organization with many offices around the globe, some user usually accesses the organization network from Tel-Aviv office. If the same user has been identified accessing the network from San Francisco offices, it is a potential threat that should be detected.

Requirements:

Internet Networking Course, Python, C++, Java, Deep Learning / Neural Networks knowledge

Guided by:

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