PROGRAMS THAT IDENTIFY BASIC ATTACKS ON ARTIFICIAL INTELLIGENCE

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Abstract: The article mainly discusses the systems and programs that detect network attacks based on artificial intelligence, their advantages over each other, and several software tools. At the same time, more attention was paid to the Darktrace program. The origin and importance of this program in organizations, as well as three main advantages, were highlighted.

Keywords: NIDS, Darktrace, McAfee Advanced Threat Defense (ATD), Palo Alto Networks Cortex XDR, Cisco Security and Automation (CSA), CrowdStrike Falcon XDR, cyber security, network traffic, anomalies.

AI-based network intrusion detection systems (NIDS) are a powerful tool to protect your network from cyber attacks. AI-based network intrusion detection systems are security systems that use artificial intelligence (AI), specifically machine learning (ML) and deep learning (DL), to analyze network traffic and detect malicious activity. Unlike traditional NIDS that rely on predefined attack signatures, AI-based NIDS can detect previously unseen anomalies and new threats.

Main part

Below we look at some examples of AI-based network intrusion detection software.

Darktrace: This AI cybersecurity company uses a form of unsupervised machine learning called anomaly detection to identify threats. Their system studies typical patterns of network traffic and then flags anything that deviates from those patterns as suspicious.

McAfee Advanced Threat Defense (ATD): This suite of security products includes Network Intrusion Detection and Prevention System (NIDPS), which uses machine learning to detect and block known and unknown threats.

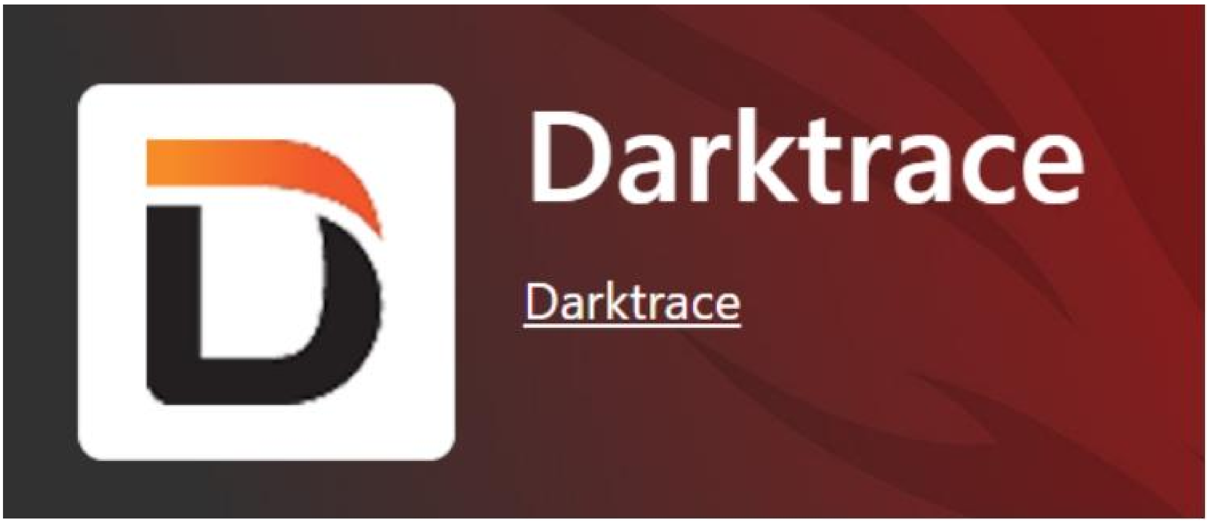
Palo Alto Networks Cortex XDR: This advanced detection and response (XDR) platform uses machine learning to analyze data from a variety of sources, including network traffic, endpoints, and cloud workloads. This allows it to detect and investigate threats more effectively.

Cisco Security and Automation (CSA): This platform includes a machine learning-based NIDS that can detect a wide range of threats, including zero-day attacks and malware.

CrowdStrike Falcon XDR: This XDR platform uses machine learning to correlate data from various sources to identify and investigate threats. It also includes endpoint protection and detection and response (EDR) capabilities.

It is no exaggeration to say that Darktace, which is one of the programs that are widely used today, especially in the field of business and finance, is noteworthy.

Darktrace is a cybersecurity solution that helps businesses prevent real-time cyber attacks, including ransomware and email phishing. This enables IT professionals to ensure security against threats to cloud environments and critical infrastructure, and to detect new or insider threats arising from malicious behavior. The application provides organizations with enterprise network security through machine learning technology and network traffic analysis (NTA) system. Professionals can use the app to prevent cyber disruptions without affecting regular business operations. Darktrace offers many features such as behavioral analysis, endpoint management, threat response, vulnerability scanning, whitelisting or blacklisting, and more. Darktrace Cyber AI Loop helps users reduce risk and enhance security. The Darktrace Cyber AI Loop is built on continuous feedback and an interconnected understanding of the enterprise. Darktrace tracks and protects people and digital assets in the IT ecosystem. Self-Learning AI learns simple life patterns to detect inappropriate and malicious behavior. This includes insider threats, industrial espionage, IoT compromises, zero-day malware, data loss, supply chain risks, and long-term infrastructure vulnerabilities.



The rise of the digital age has given way to the development of smarter, faster and more innovative technologies that have changed the way companies do business. But as technology advances, so do the threats businesses face. In 2013, Darktrace, an AI-powered cybersecurity software, emerged as a solution for businesses managing a rapidly evolving, complex threat landscape as they seek to digitize. Darktrace has a powerful software stack powered by self-learning artificial intelligence, enabling organizations to detect, investigate and respond to cyber threats in real-time, wherever they are will give.

The technology behind Darktrace was envisioned by a group of mathematicians and intelligence experts at the University of Cambridge as a new way to combat the rise of rapidly evolving cyber security threats. Among them were former CIA director of information Alan Wade and former head of MI5, Lord Evans of Weardale KCB. On April 30, 2021, just 8 years after its founding, the company launched its IPO on the London Stock Exchange at a valuation of $2.37 billion. In the years since its inception, Darktrace has quickly become a leading global player in AI cybersecurity, trusted by over 7,400 organizations in over 100 countries. The company was also named "Security Company of the Year" at the 2016 Info Security Global Excellence Awards. received a number of awards in the nomination and was recognized by Fast Company as one of the most innovative companies in the field of artificial intelligence in 2022.

3 key differentiators that set Darktrace apart:

Autonomous and automatic. Unlike most traditional security solutions that require people to manually identify signatures and constantly update them, Darktrace requires no human intervention. Instead, software learns from existing patterns to detect and respond to anomalies before disruptions occur.

A proactive approach. Most current cybersecurity defenses, such as patch management, log monitoring, and SIEM, are reactive, meaning they focus primarily on responding to incidents and preventing future attacks. provides an "always on" approach to cyber security that prioritizes prevention in order to improve human skills to protect organizations from potential threats before they arrive.

Speed and scalability. With Darktrace, threat testing is automated at speed and scale, reducing testing time by 92%. In addition, Darktrace software is designed to seamlessly integrate with existing security infrastructure, is compatible with all major cloud providers (including AWS, Google Cloud Platform, and Microsoft Azure), and spans up to 1 million devices.

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