

Nomination: 20736

DYXnet's AI-Driven Approach to Network Management and Cybersecurity

Page: General Information
Name of Organization / Company DYXnet
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Page: Entry Information
Entry Title DYXnet's AI-Driven Approach to Network Management and Cybersecurity
Category N01 - N07 - Award for Innovation in Technology > N04. Award for Innovation in Artificial Intelligence (AI) and Machine Learning (ML) > Telecommunications Industries
Submission Format An Essay of up to 625 Words
Essay <p>As AI technology continues transforming industries, DYXnet, a wholly-owned subsidiary of VNET Group (Nasdaq: VNET), is committed to empowering enterprise growth through innovative ICT solutions. By seamlessly integrating AI with network and cybersecurity services, DYXnet unlocks new possibilities for the future, ensuring that enterprises can effectively navigate the complexities of modern network management and protection.</p> <p>Challenges of Modern Enterprise Networks</p> <p>As technologies advance, particularly with the adoption of AI and IoT, network architectures have become increasingly complex. Modern enterprises now face significant challenges in managing and monitoring these intricate networks, making it difficult to comprehensively understand the entire infrastructure. Without efficient monitoring and management systems, businesses struggle to detect and resolve issues before they affect critical operations, leading to prolonged downtimes.</p> <p>The growing complexity of network architecture also increases the attack surface available to cybercriminals. As networks expand and evolve, they become more vulnerable to exploitation. At the same time, advancements in AI have reduced the cost of cyberattacks, leading to an exponential increase in their frequency. These attacks disrupt business continuity and can lead to financial losses and damage to reputation.</p> <p>Realizing AIOps with DYXnet's Intelligent Network</p> <p>To tackle these challenges, DYXnet integrates AI with its network and cybersecurity services, aiming to automate network operation and management by leveraging advanced machine learning algorithms and real-time analytics, DYXnet enhances its ability to monitor network performance and security threats proactively. DYXnet has developed InsightNet, an intelligent network powered by AI that realizes "Artificial Intelligence for IT Operations (AIOps)" and enables autonomous network management for enterprise customers. By integrating big data and machine learning technologies with its existing customer service platform, InsightNet continuously learns about customer needs and network conditions, allowing DYXnet to provide flexible and rapid responses, optimize network performance, automate troubleshooting, prevent downtime, and ultimately usher in a new era of AI-driven network management for enterprise customers.</p> <p>SD-WAN and SASE Service Enhancement: Leveraging the Reasoning Capability of LLMs</p> <p>Additionally, the DYXnet team closely monitors industry trends and continuously explores deep integration with leading Large Language Models (LLMs) such as ChatGPT and DeepSeek. This enables DYXnet to better meet the personalized needs of different enterprises and enhances its network and cybersecurity services to realize AI operations.</p> <p>In networking, DYXnet integrates LLMs with Software-Defined Wide Area Network (SD-WAN) services, enhancing the intelligence of service modules like traffic analysis, load balancing, and network resource orchestration, ensuring efficient and agile interconnectivity for enterprise networks. The AI capabilities of LLMs analyze historical traffic data within the SD-WAN network to identify traffic patterns and peak times. Moreover, its predictive abilities forecast future traffic trends, allowing SD-WAN to allocate resources and plan paths to avoid network congestion proactively. For example, significant traffic increases are predicted for a specific branch network at a particular time. In that case, the SD-WAN can preemptively switch traffic to a backup path or increase the bandwidth of that path.</p> <p>In cybersecurity, DYXnet incorporates AI into the Secure Access Service Edge (DYXnet SASE) solution, enhancing the SASE Points of Presence (PoPs) to improve the prevention and handling of cybersecurity threats, thereby creating a "logical" security network. With the logical reasoning capabilities of LLMs, DYXnet SASE can analyze and infer threat intelligence. When facing unknown threats, it constructs a logical framework of normal network behaviour from a behavioural analysis perspective. Once abnormal traffic is detected, it conducts in-depth logical reasoning to quickly identify the nature of the threat and generate effective strategies to handle it while assisting enterprise operations personnel in swiftly stopping unknown threat traffic, thus enhancing network security defences.</p> <p>Through these innovative approaches, DYXnet addresses current challenges and paves the way for future advancements in AI and machine learning within the telecommunications industry.</p>

For this category please provide

An essay of up to 625 words describing the nominee's innovative achievements in technology since July 1 2022, **OR** a video of up to five (5) minutes in length illustrating the same.

Optional (but highly recommended), a collection of supporting files and web addresses that you may upload to our server to support your entry and provide more background information to the judges.

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No

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