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(57) Abstract :
The invention discloses an automated system for network botnet traffic detection, comprising a Data Capture Module (101), Feature Extraction Unit (102), Machine Learning Classifier (103), Anomaly Detection Engine (104), Alerting and Reporting Module (105), and SIEM Integration Layer (106). The system analyzes statistical and behavioral features of network flows, employs adaptive machine learning models, and integrates anomaly detection for identifying evolving botnet patterns. It provides real-time alerts, reporting, and seamless SIEM integration, ensuring accurate detection, minimal false positives, scalability, and effective protection for enterprise and cloud network infrastructures.

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