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(57) Abstract :

The present invention discloses a computer-based model for detecting cybersecurity malware signatures comprising a data acquisition module (101), feature extraction engine (102), signature analysis unit (103), machine learning classifier (104), threat intelligence database (105), and response management interface (106). The model integrates feature-based and behavioral analysis with adaptive machine learning algorithms to identify known and unknown malware signatures effectively. It ensures real-time detection, minimal false positives, and automated response, providing an intelligent, scalable, and secure cybersecurity defense mechanism.

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