

# CYBER DEFENDER

Artificial intelligence and machine learning for holistic cyber defense

## Cyber Defender (CD)

An artificial intelligence/machine learning cyber defense tool under development to eliminate cyber threats by continuously monitoring all internal, incoming, and outgoing network traffic.

- Provides 3-layers of protection: threat identification of the knowns and threat detection and categorization of the unknowns.
- Provides a complete approach to cyber defense against all known and unknown cyber threats.
- Provides resiliency for operational Industrial/DoD systems to ensure operational readiness in highly cyber-contested environments.
- Provides a novel internal AI model validation capability for real-time assessments.
- Automated model health management for model retraining while maintaining defense capability.
- Compliance support: Zero-Trust, DoD Cybersecurity Modernization Strategy
- Development based on peer-reviewed formal mathematical proofs.
- Light Weight, low power, and cost with substantial ROI.

## Cyber Defender Benefits

- Comprehensive Threat Detection: Complete and tested, detecting all possible threats.
- Resiliency: Automated response to cyber threats across operational infrastructure.
- Scalable: From edge to enterprise-wide
- Proven Effectiveness: 96% more effective detection with 100x fewer false alarms using CIC datasets.
- Continuous Protection: No downtime with automatic configuration – No patching necessary.
- Compatible with most IT infrastructures.

## Next-Phase Cyber Defender Benefits

- Enhanced Threat Detection: Identifying known, mutated, and novel threats with actionable intelligence.
- Insider Threat Detection: Advanced anomaly and abnormal behavior detection.
- Real-Time Incident Response: Providing active intelligence, alerts, and actions.

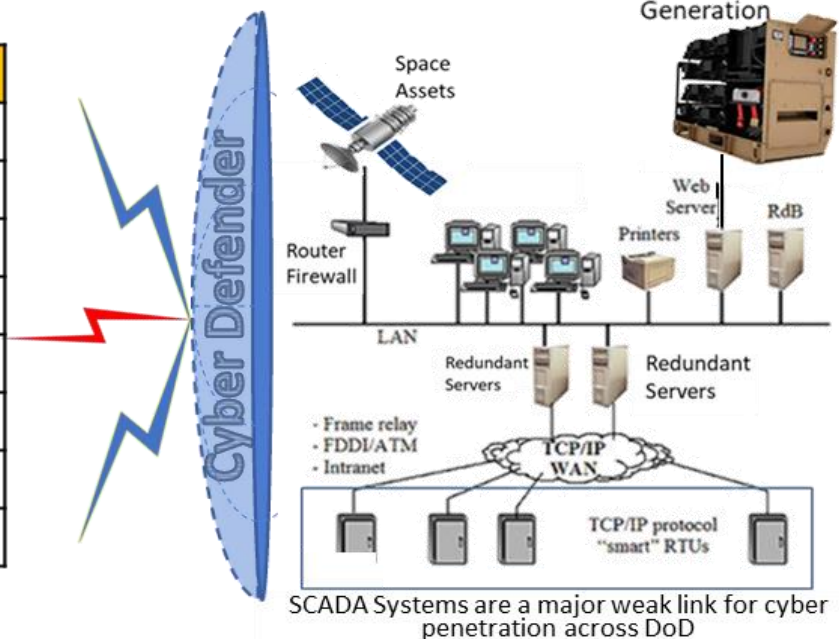
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### Proven Detection against:

Method	Attack Type
CEMA, Outside the Wire, Inside the Wire, Direct	Naïve Response Injection
	Port Scan
	TCP IP DoD Flood
	UDP DoS Flood
	SMTP DoS
	Complex Injections
	Reconnaissance
	File Extraction



**Experience the Power of AI-driven Cyber-Defense**