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When Bots Attack: Safeguarding Against AI Cyber Threats

www.kirkhamirontech.com

Tom Kirkham
Founder & CEO

About Me



Tom Kirkham

- Founder, CEO & Acting CISO
- 30+ Years of Technology
- Award-Winning Software Designer
- Author, Entrepreneur, & Investor
- ***ISIS Kill List Survivor***

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Seminal Events in Hacking

- 1991 Michelangelo Virus
- 2000 ILOVEYOU Virus
- 2007 Storm Worm
- 2010 Stuxnet
- 2017 WannaCry Ransomware
- 2020 Onwards AI-driven Cyber Attacks

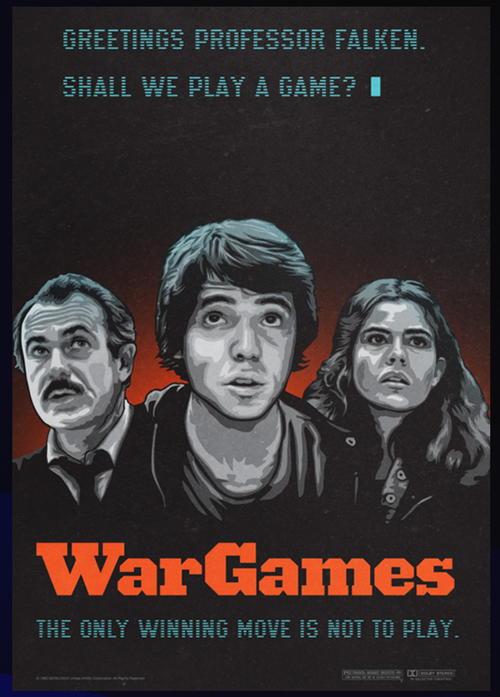
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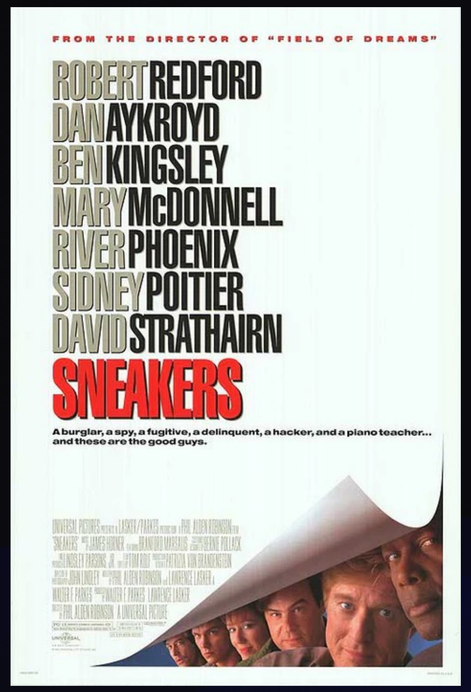
Notable Breaches

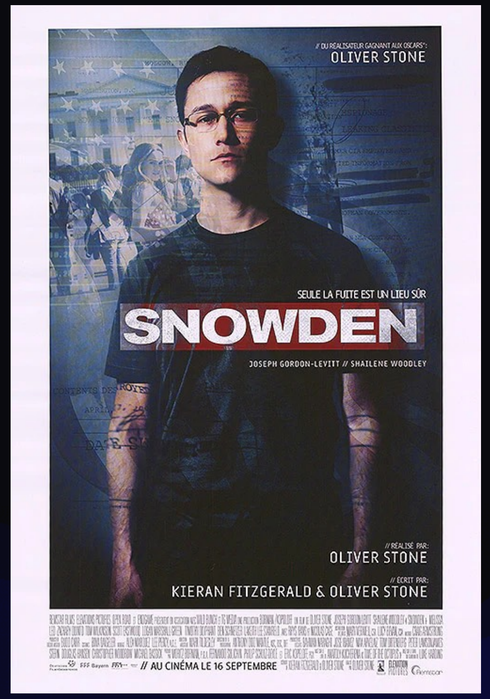
- **NSA**
- **DoD/US Gov**
- **CISA**



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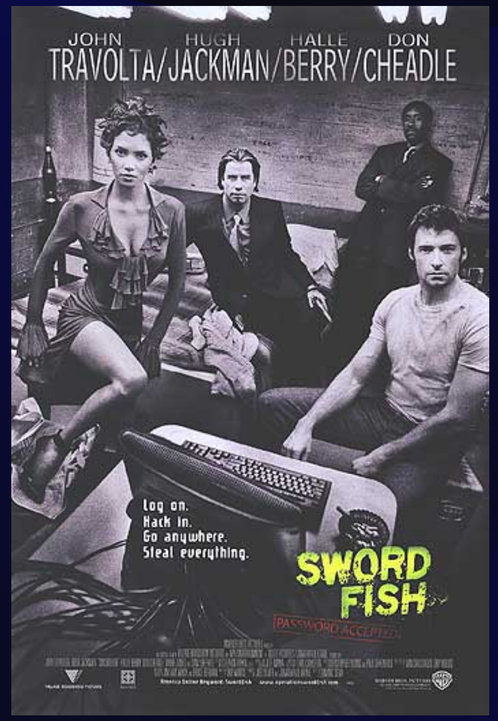

GREETINGS PROFESSOR FALKEN.
SHALL WE PLAY A GAME?
WarGames
THE ONLY WINNING MOVE IS NOT TO PLAY.

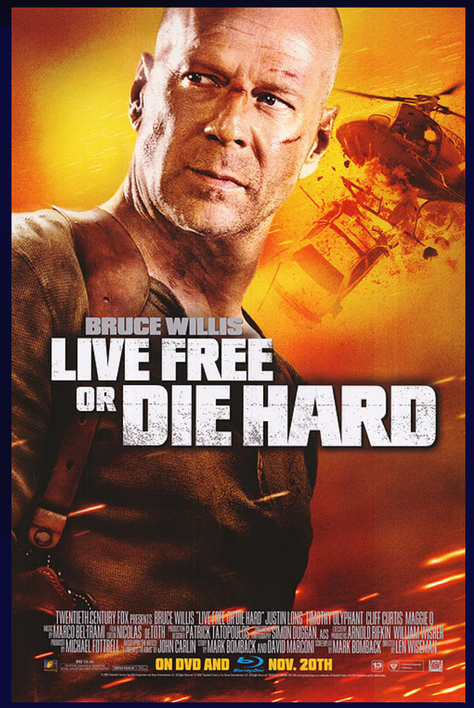

FROM THE DIRECTOR OF "FIELD OF DREAMS"
ROBERT REDFORD
DAN AYKROYD
BEN KINGSLEY
MARY McDONNELL
RIVER PHOENIX
SIDNEY POITIER
DAVID STRATHAIRN
SNEAKERS
A burglar, a spy, a fugitive, a delinquent, a hacker, and a piano teacher... and these are the good guys.

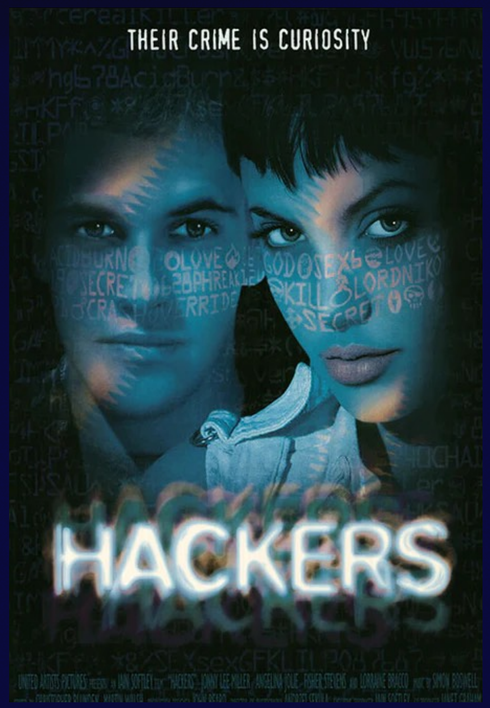

OLIVER STONE
SEULE LA FUITE EST UN LIEU SÛR
SNOWDEN
JOSEPH GORDON-LEVITT // SHAILENE WOODLEY
OLIVER STONE
KIERAN FITZGERALD & OLIVER STONE
// AU CINÉMA LE 16 SEPTEMBRE


CHRIS HEMSWORTH
blackhat


MR. ROBOT


JOHN TRAVOLTA/HUGH JACKMAN/HALLE BERRY/DON CHEADLE
Log on.
Hack in.
Go anywhere.
Steal everything.
SWORD FISH
PASSWORD ACCEPTED


BRUCE WILLIS
LIVE FREE OR DIE HARD
ON DVD AND NOV. 20TH


THEIR CRIME IS CURIOSITY
HACKERS


THEY TOOK YOUR DATA.
THEN THEY TOOK CONTROL.
A NETFLIX ORIGINAL DOCUMENTARY
THE GREAT HACK
From the Academy Award® nominated filmmakers behind THE SQUARE
JULY 24 | NETFLIX


Skeet ULRICH
"Scream"
Russell WONG
"Prefetian"
Tom BERENGER
"A Murder of Crows"
TAKEDOWN

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JULIA ROBERTS
MAHERSHALA ALI
ETHAN HAWKE
MYHA'LA
THERE'S NO GOING BACK TO NORMAL
LEAVE THE WORLD BEHIND
WRITTEN FOR THE SCREEN & DIRECTED BY SAM ESMAIL
A FILM BY SAM ESMAIL
IN SELECT THEATERS NOVEMBER
NETFLIX | DECEMBER 8
WarGames
THE ONLY WINNING MOVE IS NOT TO PLAY.
SNEAKERS
MR. ROBOT
SWORD FISH
TAKEDOWN

Leave the World Behind *(2023)*

Lessons:

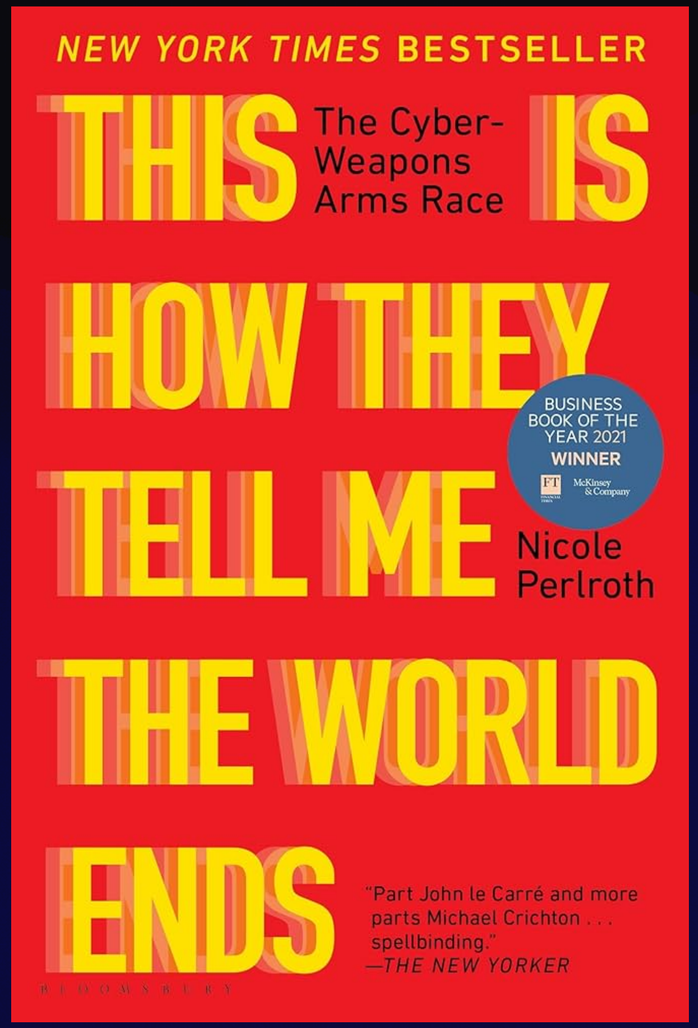
1. Expect the Unexpected
2. Preparedness is Key
3. AI = Double Edged Sword
4. The Human Element

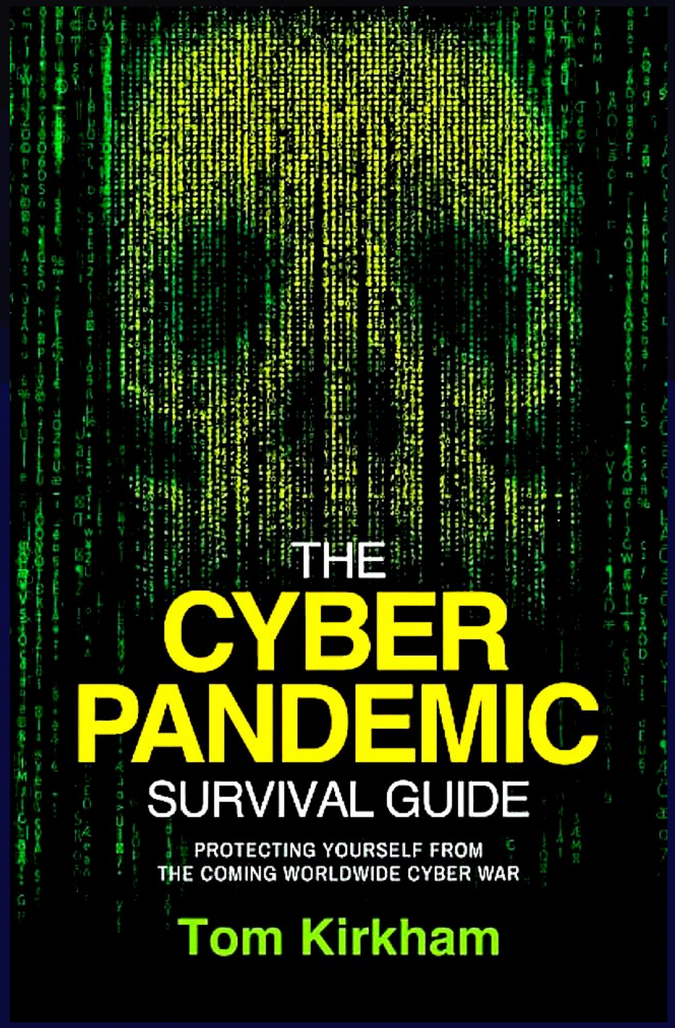


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The Cyber Pandemic







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Size and Scale of Hacking Industry



- Hacking is a Speciality
- Attacks are at Scale/Volume & AI-Driven
- Attacks are *Fully* Automated
- BIG Industry - Highly Specialized
- Easy for a Single Attack to gross $10M+

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Cybercrime is Expected to Skyrocket

Estimated annual cost of cybercrime worldwide (in trillion U.S. dollars)



Source: Cybersecurity Ventures / As of Sep 2023 Data shown is using current exchange rates

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$10.5 TR

2025

$9.25 TR

2024

$8 TR

2023







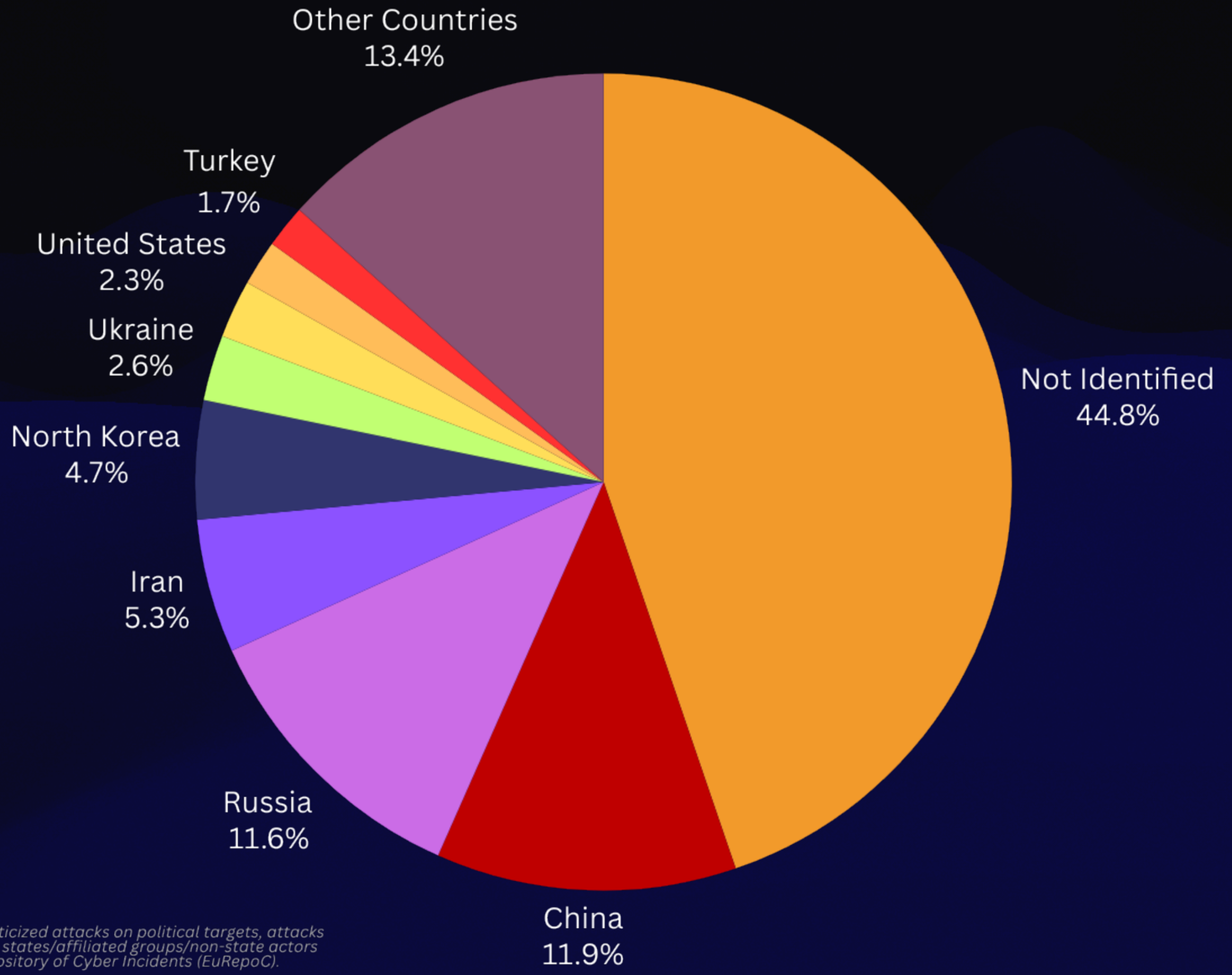
If cybercrime were measured as a country, it would be the world's third-largest economy.

Source: Cybersecurity Ventures

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Who’s Behind Cyber Attacks?

Countries responsible for the largest share of cyber incidents from 2000 to 2023.



Analysis of 2,506 incidents; politicized/non-politicized attacks on political targets, attacks on critical infrastructure attacks carried out by states/affiliated groups/non-state actors with political objectives. Source: European Repository of Cyber Incidents (EuRepoC).

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Cyber Threat Actor	Motivation
Nation-States	Geopolitical
Cybercriminals	Profit
Hacktivists	Ideological
Terroist Groups	Ideological Violence
Thrill Seekers	Satisfaction
Insider Threats	Discontent



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AI-Related Attack Styles

- Deep Fake Video/Audio/Text
- AI-Powered Phishing/ Spearphishing
- Automated Malware Creation
- Intelligent Botnet Attacks
- Automated Social Engineering
- **AI-Based Targeted Attacks**



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Psychological Warfare

- Social Proof and Herd Behavior
- Scarcity and Urgency
- Personalization and Behavioral Targeting
- Confirmation Bias
- Misinformation and Disinformation
- Reciprocity
- Authority
- Commitment and Consistency
- Emotional Appeals



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What's at Risk?



- Loss of Reputation & Respect
- Fines
- Non-Compliance Fallouts
- Productivity Losses
- Revenue Losses
- Bills not Paid; Payroll
- Release of Client Data

Up to 60% of Businesses Go Out of Business within 2 Years of an Attack

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We Commonly See…

- Lack of Understanding In Risk Management and Leadership
- Dependence on Antivirus
- Not Monitoring Backups
- No Ransomware-Proof Backup
- Not Consulting with a Cybersecurity Professional
- Absence of Training

95% of Breaches are Caused by HUMAN ERROR

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Your Turn!



What AI security issue worries you the most?

(Answer in Chat)

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AI-Based Defenses



Fight AI with AI

- Automated Threat Intelligence and Analysis
- Predictive Analytics for Threat Forecasting
- AI Driven Security Orchestration, Automation and Response (SOAR)
- AI-Enhanced Phishing Detection and Response
- **Endpoint Detection and Response (EDR)**

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Endpoint Detection & Response
EDR

Machine Learning + Artificial Intelligence =

Stops Known and Unknown Threats

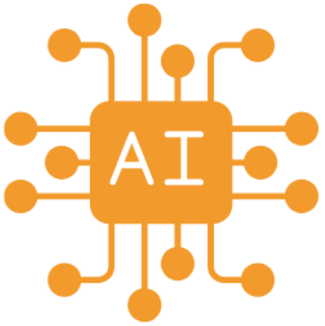
Antivirus

Stops only **known** threats = Outdated Technology,

leaving you vulnerable

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In 2022

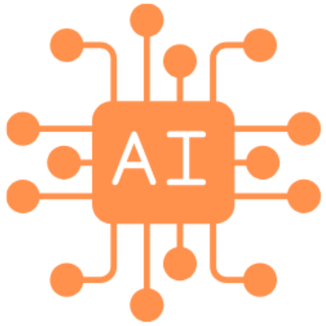


the market size for AI in cybersecurity

$17 billion

Precedence Research

By 2032



is projected to reach an impressive

$102 billion

Precedence Research

48.9%

of global executives and security experts consider AI and machine learning as potent tools to combat modern cyber threats

The Economist Intelligence Unit

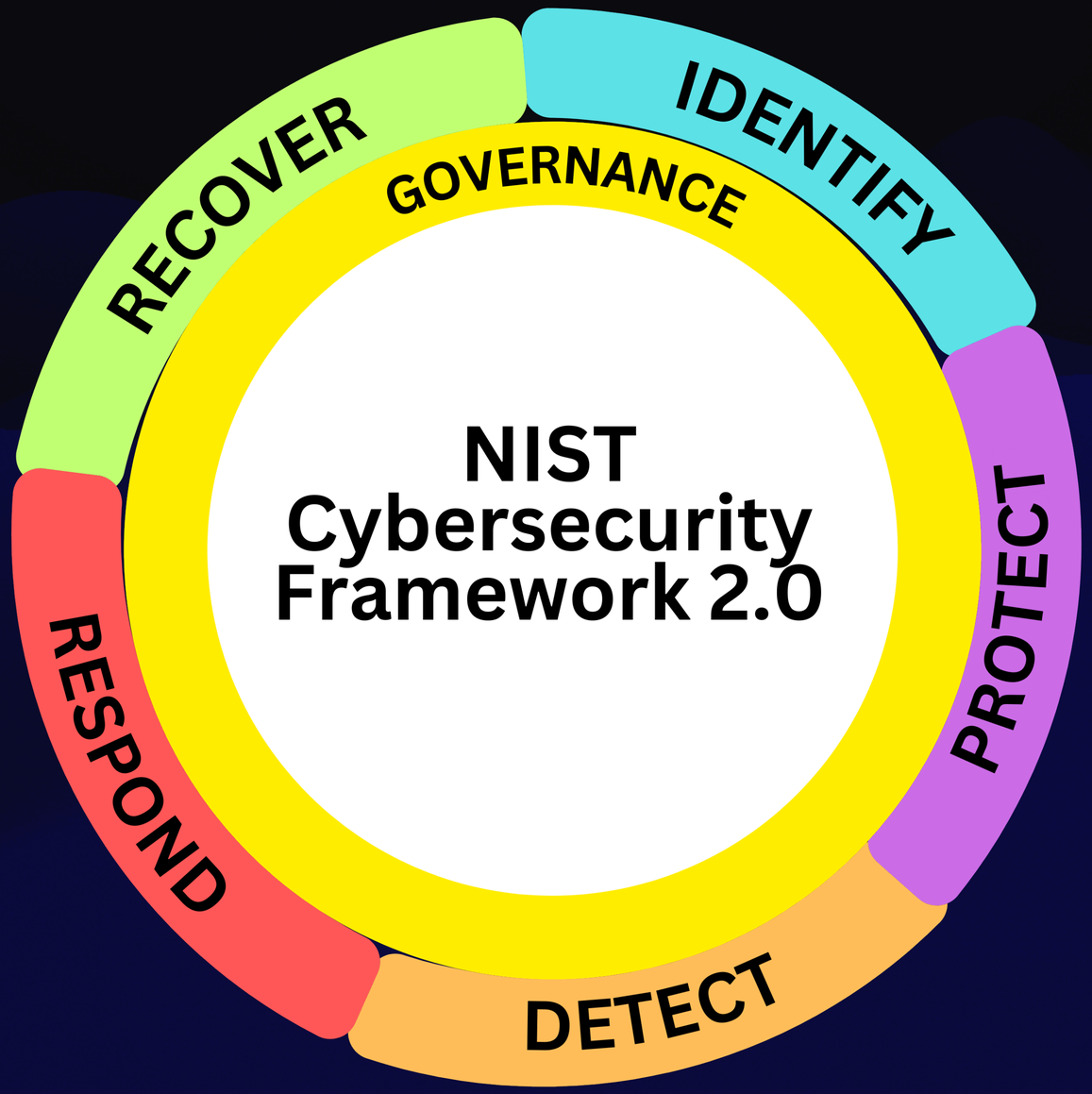
44%

of global organizations are already leveraging AI to detect security intrustions.

Pillsbury Law

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NIST Cybersecurity Framework



The 3 Pillar Methodology



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The 3 Pillar Methodology



Cybersecurity Defense Systems

IT Infrastructure Systems

Corporate Governance

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Cybersecurity

- Intrusion Detection System
- Intrusion Prevention System
- Advanced Email Security
- DNS Filtering
- Password Manager
- MFA
- Disk Encryption
- CyberSecurity Awareness Training

- Network & Security Assessment
- Vulnerability Assessment
- Managed SOC
- Penetration Testing
- Compliance as a Service
- **AI-based Protection**
- Cyber Security Risk Assessment
- Patch Management

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IT Infrastructure

- File Backup & Incident Response Plan (IRP)
- Business Continuity & IRP
- **Disaster Recovery & IRP**
- Remote Monitoring and Mgmt
- Firewall
- Hardware
- SASE or VPN
- Spamfilter

- Asset Mgmt
- Mobile Device Mgmt
- Partnership with Current IT
- Network Device & IoT Mgmt
- Printer & Copier Mgmt
- Help Desk
- Cloud Services Mgmt
- Telecommunications (Unified)

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Governance

- Management and Leadership Alignment
- Culture Initiatives
- Security FIRST
- Compliance
- Insurance
- External Compliance
- Budgeting
- Benchmarking
- **NIST CSF Compliance**
- SLA & Triage
- Periodic Business Review
- Incident Response Plans (IRP)
- SOPs and Other Standards

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The “Good Guys”

MSSP: Managed Security Services Provider
MSP: Managed Service Provider

Managed Cybersecurity Services (MSSP)

- Network & Cloud Security
- Incident Detection
- Incident Response
- Security AwarenessTraining
- And more

Managed IT Services (MSP)

- IT Infrastructure Management
- IT Support / Help Desk
- Remote Workforce Solutions
- Improved ROI
- And more

Co-Managed Services (Ala Carte)

- Increase Productivity
- Enhance Security
- Escalate Efficiency
- Improve Customer Experience
- And more

MSSP = Excellent Security
MSP = Maximum ROI

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Security First.



Then IT.

MSSP + MSP (or Internal Staff)

Treat IT as a “plug-in” to a

Security First environment

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Complimentary Security & Infrastructure Assessment

info@kirkhamirontech.com

www.kirkhamirontech.com

479-434-1400

Be Proactive: *The cost of a breach can run 4x to 5x the cost of prevention.*

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