



Al is ruining my life: Group therapy for security leaders

Bharat Mistry



Regulations

Machine Learning

Data

Natural Language Processing

Compliance

Generative Al

Deep Learning

Prompt Injections

Privacy

ChatGPT

Recall

Conversational Al

Inference Engine

Domaine Knowledge

Deepfakes

Large Language Models

Semi-Structured Data

RAG Hallucinations



Fine-Tuned Model

Categorization

Knowledge Graph

Intelligence

Model Poisoning

Foundational Models

Structured Data Syntax

Pretraining

Multimodal Models

Data Drift

Responsible AI

Computer Vision

Metadata

Neural Networks

Model Denial of Service

Prompt

Tagging

Training Model



2 | ©2025 Trend Micro Inc

Feeling Overwhelmed?



Business dynamics and Al adoption are growing the attack surface

Expanding Attack Surface

Strained teams require integration, automation, and prioritization to achieve security outcomes

Demand for Automation and **Prioritization**

Regulatory frameworks aligning to 'Zero Trust' frameworks to inform best practice

Regulatory Landscape

Adversarial Activity and Cyber Insurance

Shift to vendor consolidation, tech stack simplification, and centralized visibility

Projects

Increased fraud, ransomware and exfiltration activity influencing the need for proactive strategies to obtain cyber insurance

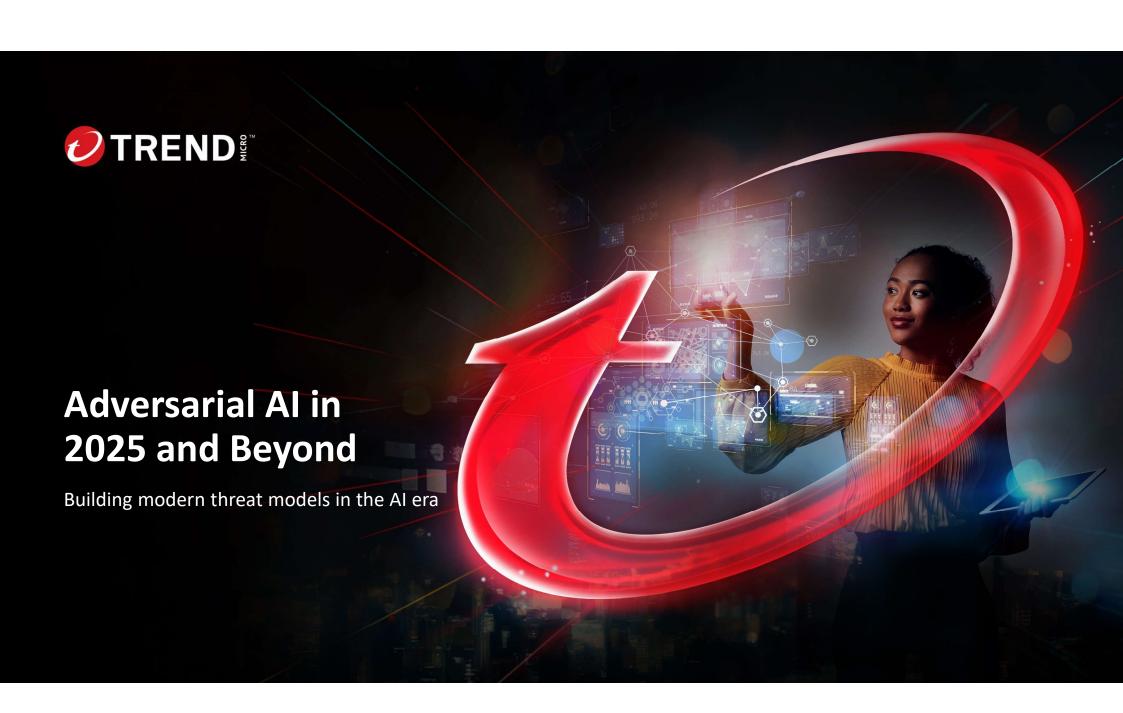
Al-Driven Cyber Risk Remediation

Anticipate user needs and proactively serve insights, risk mitigation recommendations, and automations



Include Agent here, maybe Agentic Automation and Prioritization J(0

Cyber Insurance seems out of place with the rest Josiah Hagen (RD-NA); 2024-07-22T21:20:13.016



Managing Al Risk in 2025 and Beyond...

Rogue Al

Scaling Fraud

Data & Privacy



J(0 Agentic Systems are the enabling technology for Rogue Al. I'd take Agentic Systems out here.

If you need a 3rd risk: Data Loss or Data Privacy violation

Scaling Fraud is now, so is Data Loss Rogue AI is next year Attack automation is in the future Josiah Hagen (RD-NA); 2024-07-22T21:22:44.985

Rogue Three



Subverted Rogues

LLM operates against intended use via attacker



Malicious Rogues

Deployed by attackers to steal computing resources



Accidental Rogues

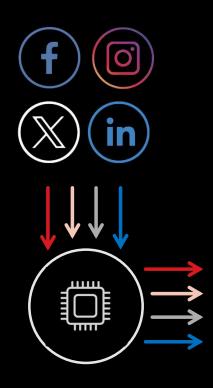
Created by human error or technology limitations



- Reorder start w/ subverted, then malicious, and then oh ya.. mistakes are still our biggest problem Shannon Murphy (MKT-NA); 2024-07-24T13:25:12.284
- **0 0** Reorder for impact; introducing the new concept about people subverting your AI systems first; and then malware, and then config problems;

Shannon Murphy (MKT-NA); 2024-07-24T13:25:40.090

Contending with Fraud Effectiveness and Scale



Hi John,

It was great catching up with some of your co-workers at last week's "Lawyers in Tech" meetup. I saw you weren't able to make it... See this link for some fun photos from the event!



Al-Driven Phishing Effectiveness

- Al can help improve quality and personalize phishing & fraud emails
- Even greater effectiveness
- Even harder for employees to identify

See: "The Future of Whaling Attacks: Al-Powered Harpoon Whaling", Trend Micro Forward Threat Research, 2023



Contending with Fraud Effectiveness and Scale

YOKO ONO: "I HAD AN AFFAIR WITH HILLARY CLINTON IN THE '70S"

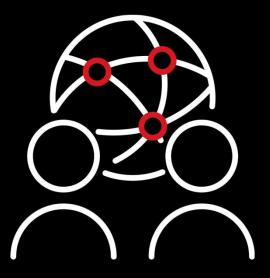


932k / G+ 1.27k / 657 🔀









Mass Misinformation
Spread via Social Networks



[@Ashley Savoie (MKT-NA)] these need to be built out a bit more. I updated the phishing related slide on 8; it's a little busy but I think we could consider adding some screenshots here of different misinformation campaigns (i.e. White House on fire, celebrity stuff, election campaign videos)

Shannon Murphy (MKT-NA); 2024-07-26T15:39:33.517

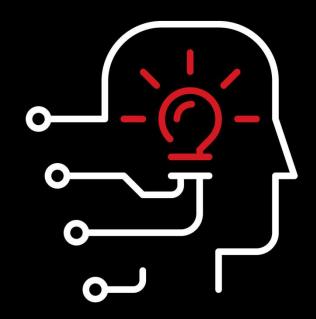
ASO 0 Thoughts?

Ashley Savoie (MKT-NA); 2024-07-26T17:38:23.716

0 1 Good

Shannon Murphy (MKT-NA); 2024-07-26T21:53:11.992

Contending with Fraud Effectiveness and Scale



Synthetic Media
Deepfake and Audiofake

Finance worker pays out \$25 million after video call with deepfake 'chief financial officer'

By Heather Chen and Kathleen Magramo, CNN
2 minute read · Published 2:31 AM EST, Sun February 4, 2024

Top WPP advertising executive hit by scammers using voice cloning attack

News By Sead Fadilpašić published May 13, 2024

Al-powered scams are getting more dangerous

A deepfake 'CFO' tricked the British design firm behind the Sydney Opera

House in \$25 million scam

TECH- DEEPFAKES



ASO Note from Shannon:

Need to expand on or communicate in the context of an attack workflow or show ChatGPT instance (we did this w/ the previous version of the talk

Ashley Savoie (MKT-NA); 2024-07-25T11:42:29.315

Also need to build out a bit more; maybe provide screenshots of the WPP attack and the UK architectural firm being target of deepfake - not just sci fi; actually coming to fruition;

[@Ashley Savoie (MKT-NA)]

Shannon Murphy (MKT-NA); 2024-07-26T15:40:22.974

Data Privacy Challenges

Tracking and Recognising

Al can track and identify people across different devices and places

Discrimination and Bias

Al can make unfair decisions based on biased data Lack of Transparency

Some Al systems are hard to understand or challenge.

Data Exploitation

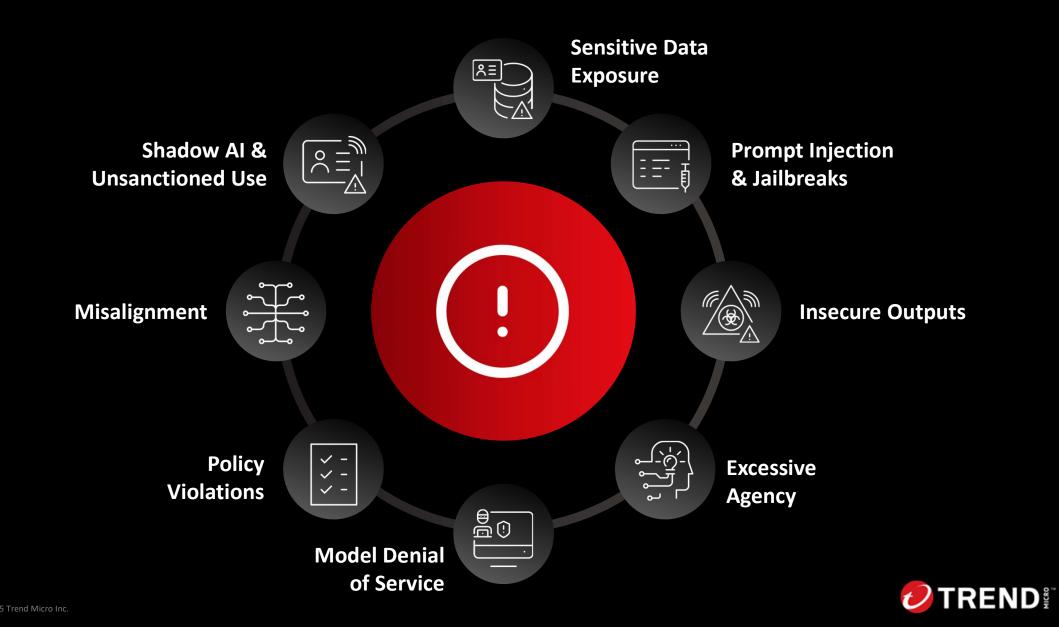
People often don't know how much data their devices collect and share. Prediction

Al can predict sensitive information from seemingly harmless data

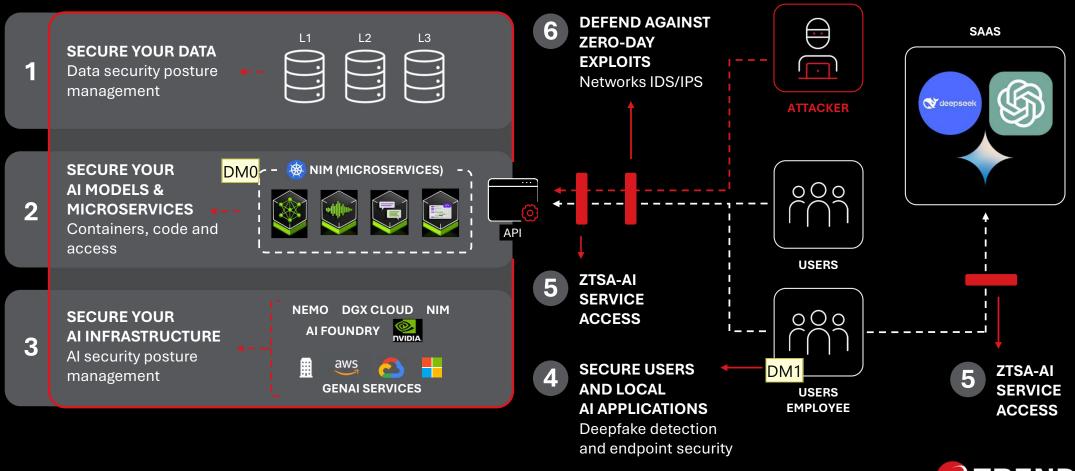








Security For AI Blueprint



DM0

So just yesterday, I noticed that for these two elements of our blueprint, they don't line up perfectly well with our Security for AI End-To-End Protection table. (Slide 13).

We do have "Models" listed - but in the table the Trend Vision One solution / capabilities listed are ZTSA Al Secure Access and ZTSA Access Controls and NOT Container Security.

Be good to get Fernando's take on this.

[@Bharat Mistry (PM-EU)]

Dave McDuff (PM-NA); 2025-05-01T12:54:54.889

DM0 0

If this is a change, please let me (us) know as it needs to be propagated to the many decks we have that use this slide.

Dave McDuff (PM-NA); 2025-05-01T12:58:01.086

DM1

NOTE this title includes Local AI Apps

Dave McDuff (PM-NA); 2025-05-01T13:00:25.151

Security for Al: End-to-End Protection

		SECURITY CHALLENGES	SECURITY CONTROLS	TREND VISION ONE
Data		Sensitive information blind spots	Data Security	Data Security posture management
Models	⋘ ₩ 01	Model poisoning and improper model usage	Implement guardrails for AI API's request/prompt (inbound) & responses (outbound)	ZTSA AI Service Access
Microservices		DMO nerabilities in AI supply chains and microservices architecture	Security validation on CI/CD pipeline and implement container controls	Code security Container security
Infrastructure	aws A &	Security risks in AI model deployment and resource exhaustion attacks	Infrastructure posture management	AI-SPM API Security AI-DR
Network		Exploiting vulnerabilities in Al infrastructure and hybrid cloud environments	Network Security	Network IDS/IPS TippingPoint
Users	22	DM1 ecure design and mismanagement leading to sensitive data exposure by Al	Al application access control and protect local Al application configurations	ZTSA AI Service Access V1ES - Deepfake detection Al app guard



NOTE: There is only a minor mention of Microservices in the Blueprint slide (slide 12) with AI Models? Any updates required here?

[@Bharat Mistry (PM-EU)]

Dave McDuff (PM-NA); 2025-05-01T12:55:53.682

DM0 0 If this is a change, please let me (us) know as it needs to be propagated to the many decks we have that use this slide.

Dave McDuff (PM-NA); 2025-05-01T12:57:54.884

Should this be re-labelled Users and AI Apps to be consistent with the Blueprint slide 12 point number 4? [@Bharat Mistry (PM-EU)]

Dave McDuff (PM-NA); 2025-05-01T13:01:02.605

DM1 0 If this is a change, please let me (us) know as it needs to be propagated to the many decks we have that use this slide.

Dave McDuff (PM-NA); 2025-05-01T13:01:13.850

Security for Al: End-to-End Protection

		SECURITY CHALLENGES	SECURITY CONTROLS	0
Data		Sensitive information blind spots	Data Security	
Models	ॐ ₩	Model poisoning and improper model usage	Implement guardrails for AI API's request/prompt (inbound) & responses (outbound)	Trend Vision One Enterprise Cybersecurity Platform
Microservices		Vulnerabilities in AI supply chains and microservices architecture	Security validation on CI/CD pipeline and implement container controls	
Infrastructure	aws A &	Security risks in AI model deployment and resource exhaustion attacks	Infrastructure posture management	
Network		Exploiting vulnerabilities in Al infrastructure and hybrid cloud environments	Network Security	
Users	22	Insecure design and mismanagement leading to sensitive data exposure by Al	Al application access control and protect local Al application configurations	



Security for AI Blueprint

- What is an LLM application?
- How to integrate security into Al applications architecture?
- The Al Attack Surface in Action
- Threat Modelling for LLM
- Blueprint For Securing Al
- LEARN Architecture Overview





Bharat Mistry

 $Bharat_mistry@trendmicro.com$