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Institute of Internal Auditors Thailand

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IA CLINIC 2/2026
AI กับงานตรวจสอบภายใน:
โอกาส ความเสี่ยง และ การควบคุมที่ IA ต้องรู้

ส่วนที่ 2: ความเสี่ยงและการควบคุม ในการใช้งานปัญญาประดิษฐ์
AI Risk and Control

รุจคุณ โตวนำชัย CISA, CRISC, CDPSE, AAIA

AI Consideration

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WHAT DO WE NEED TO KNOW TO AUDIT AI?

AI Model

AI Governance

AI Data Governance

Bias and Fairness

Transparency and Explainability

AI Risk Management

AI Development

Regulation and Compliance

AI Operation

AI Threat and Vulnerabilities

HITL

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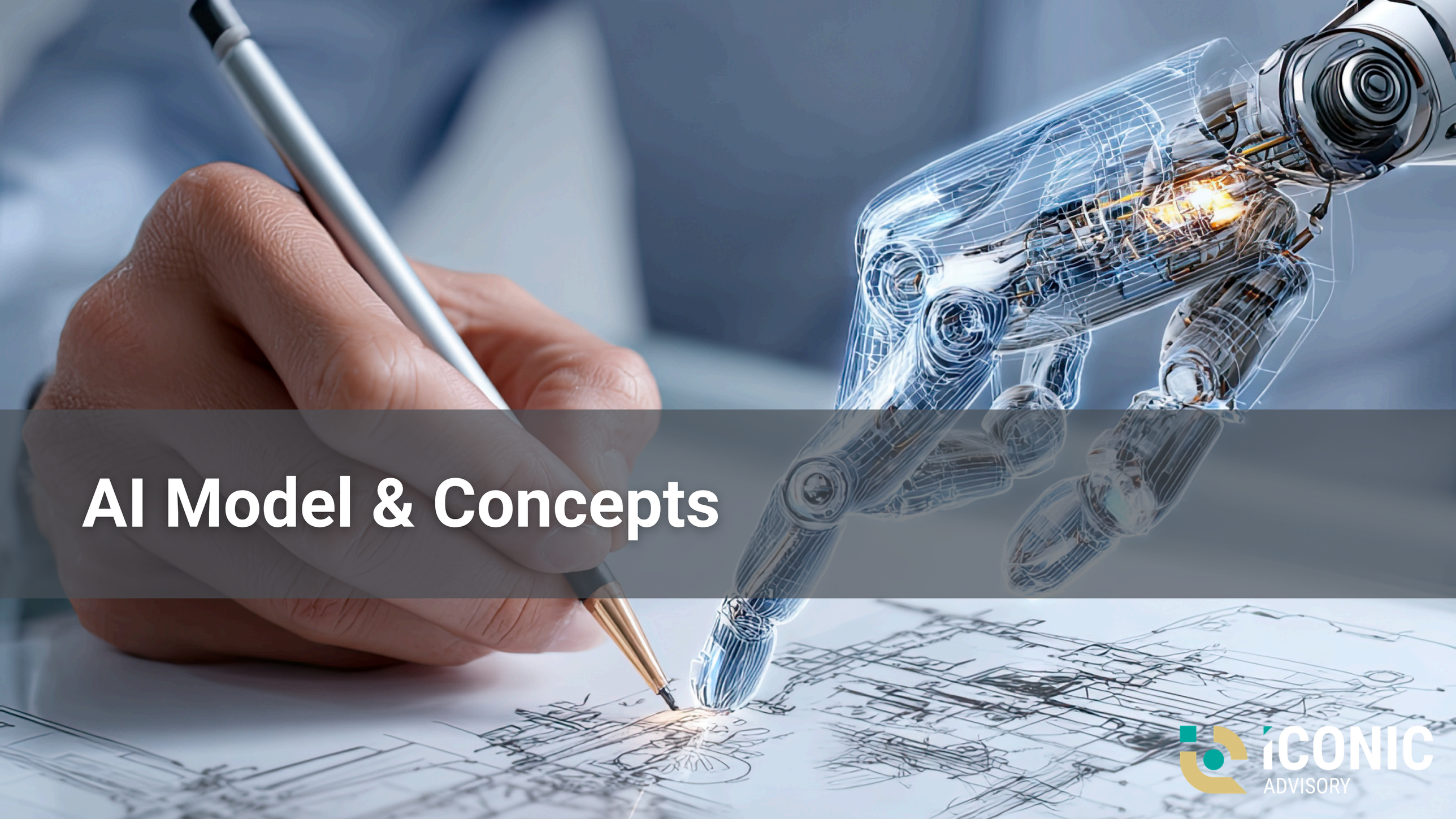

AI Model & Concepts

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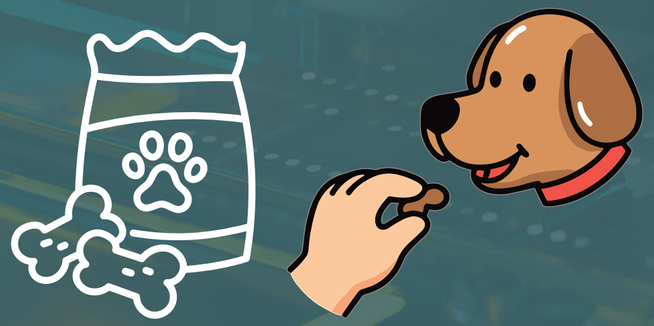
MACHINE LEARNING

Supervised Learning

Unsupervised Learning



Reinforcement Learning

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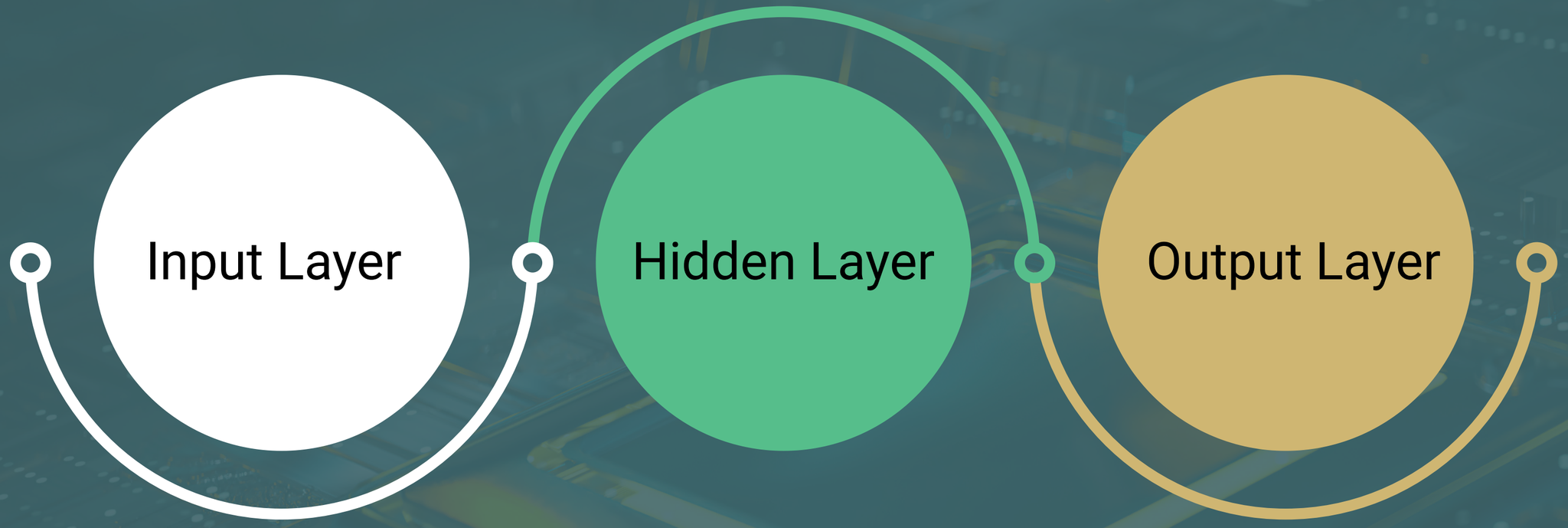
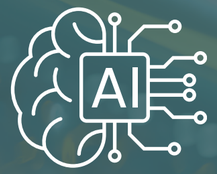
NEURAL NETWORK



Picture of Cats

Evaluate Patterns
(Similar to Human Brain)

It’s a Cat!!



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AI VS. GEN AI

AI

Self-driving cars

Netflix recommending

Facial recognition

Forecasting sales trends

Car Park License Reader

X-Ray Reader

GEN AI

- Text Generation
- Image Generation
- Code Generation
- VDO/Clip Generation
- Music Composition

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High Risk AI

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HIGH RISK AI - FOR ENTERPRISE

1. AI impact to regulatory compliance
2. AI makes automated decision (without Human)
3. AI uses sensitive/personal Data
4. AI Impact to Ethical Consideration

- Car Driving AI
- Credit scoring AI
- Loan approval AI
- Medical Diagnosis AI
- Medical Device AI
- Job Applicant Screening AI
- Staff Promotion Recommendation AI
- Biometric AI

- Drafting E-mail AI
- Minute Taker AI
- Internal Knowledge Chatbot
- Internal Policies and Compliance Chatbot
- Training Course Suggestion AI
- Generate Market Image AI

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Ethical Consideration

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ETHICAL CONSIDERATION

Ethical Use (EIA)

Bias and Fairness

Human Rights (FRIA)

Transparency and Explainability

Trust and Safety

Environmental Impact

Intellectual Property Consideration

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AI Governance

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AI R&R AND GOVERNANCE

Strategy
Vision Mission
Value Alignment

Leadership and Committee
(EDM)

Training
Awareness
Talent Management

AI Policy

What is High vs. Low Risk AI?

Technical Team:

- AI Model Specialist
- AI Data Engineer
- AI trainer
- IT Team

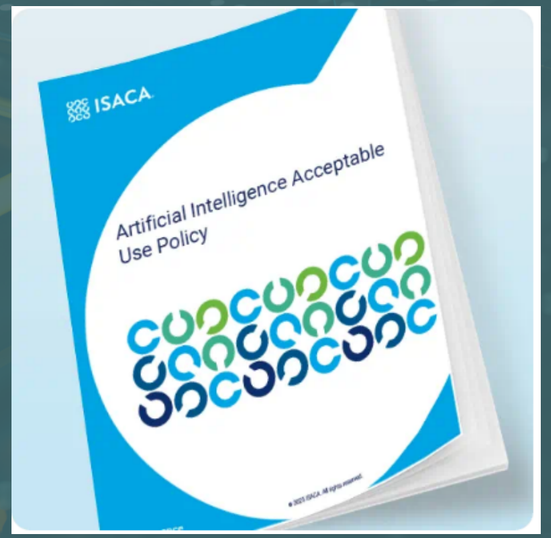
User

Governance and Oversight
2nd & 3rd Line

- Ethical and Compliance Specialist
- DPO
- IT Security
- AI Risk Specialist
- AI Auditor

AUP

AI Acceptable Use Policy



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AI Risk Management

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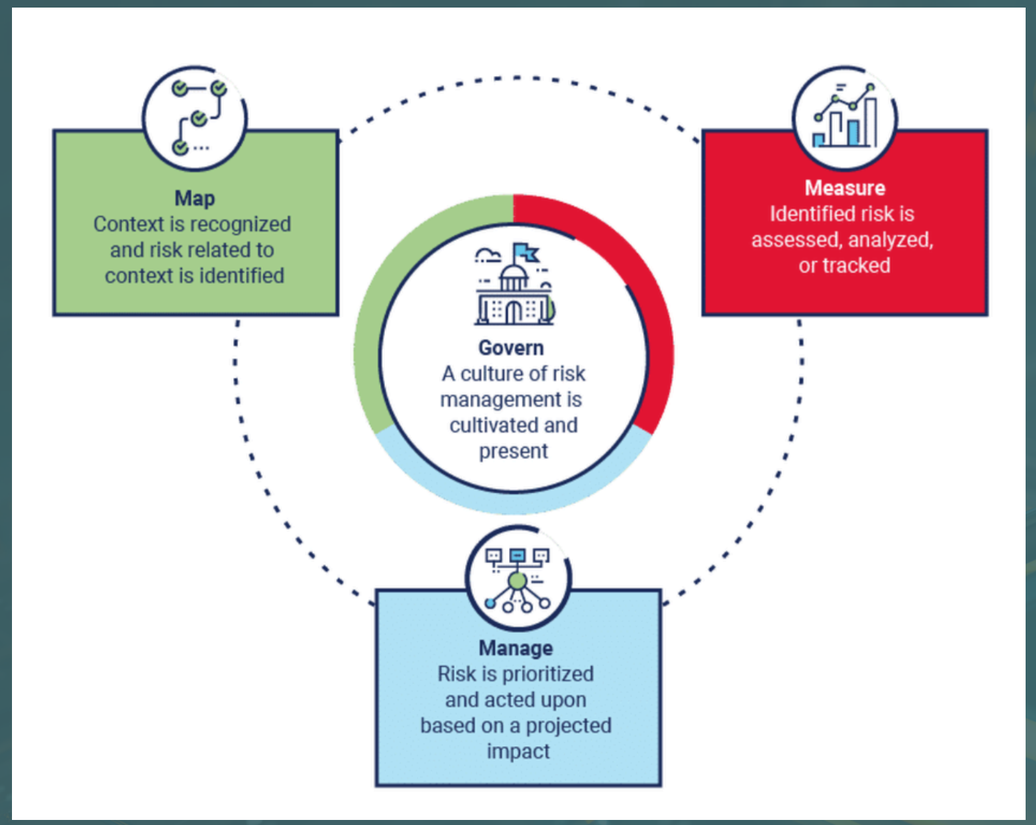
AI RMF AND PRACTICE



NIST AI RMF Core Functions
Source: US National Institute of Standards and Technology, NIST AI 100-1: Artificial Intelligence Risk Management Framework (AI RMF 1.0), USA, 2023, https://nvlpubs.nist.gov/nistpubs/ai/nist.ai.100-1.pdf

- Incorporated into organization's overall risk management
- Establish clear accountability and ownership
  - Example: Using AI for customer support
    - AI answer/support the client incorrectly? Who is the risk owner? AI dev, CS, Data scientist, (multiple owner?)

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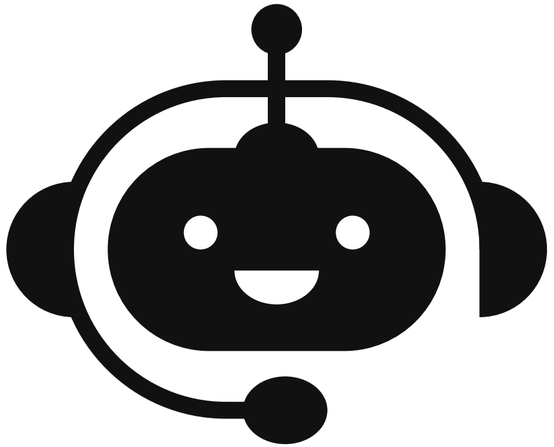
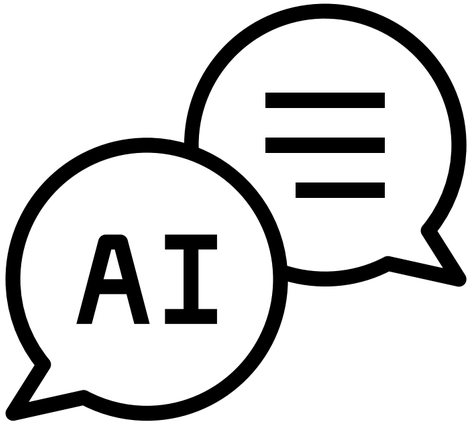
EXAMPLE OF KRI FOR CHATBOT

- Customer satisfaction score
- Incorrect response rate
- Misunderstanding rate
- Escalation rate

Automate KRI monitoring.





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AI Threat and Vulnerabilities

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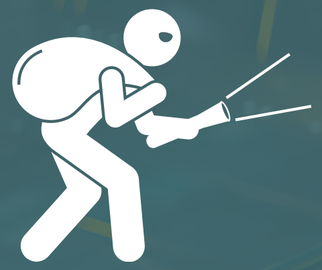
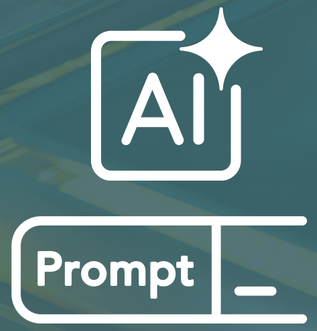
AI THREAT

Training Data Leakage



Model Theft

Model/Data Poisoning



Prompt Injection

Controls:

- Prompt Templates
- Access control
- Adversarial Testing
- Regularized

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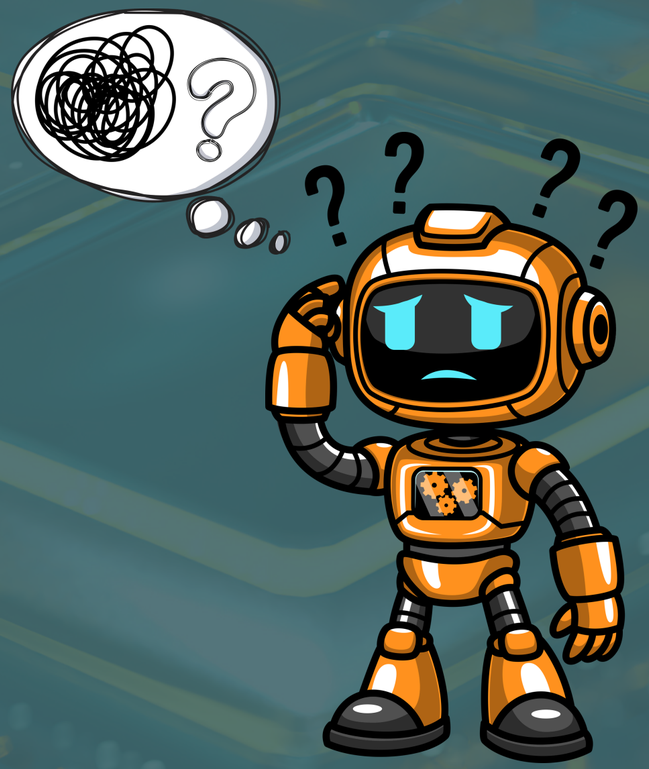
WHAT IS HALLUCINATION? HOW TO MITIGATE?

Hallucination = AI provides false or nonsensical information.

Reasons:

- Poor Training Data
- Lack of real-world data
- Ambiguity Input Data



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AI Data Governance
Data Privacy

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QUESTION?

AI Chatbot - who is the **data owner** of the chatlog?

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DATA GOVERNANCE

- AI Solutions, does not remove Ownership from employee
- Data Inventory → Training Data
- Data Classification (CIA+P)
  - Data Classification AI - Automated tool
  - AI Data Classification - e.g. Training data, PII, Sensitive, should be labeled clearly
- Data Consent
- Data Licensing
- Other Data Gov - Retention, Data Quality

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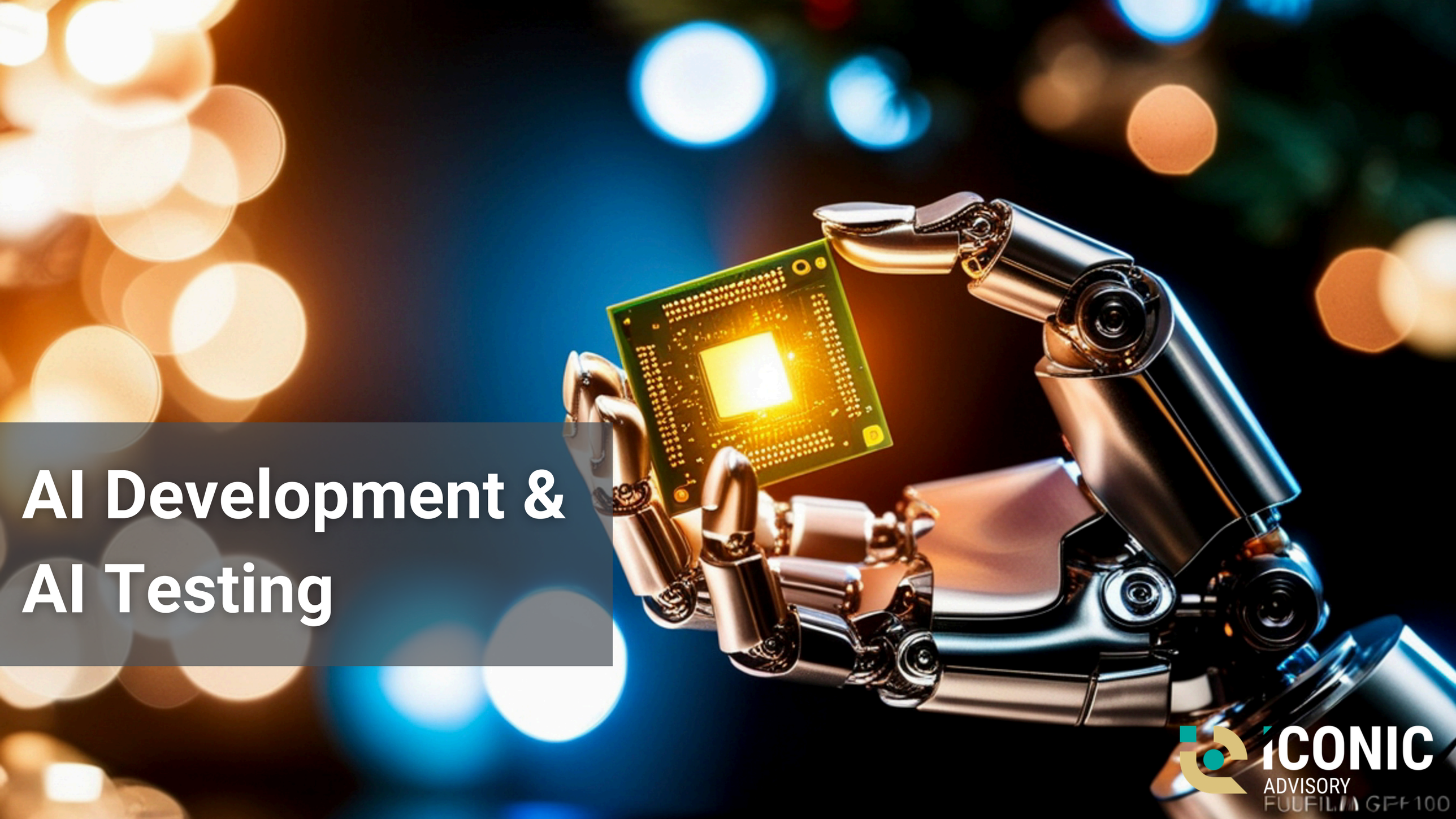
AI Development & AI Testing



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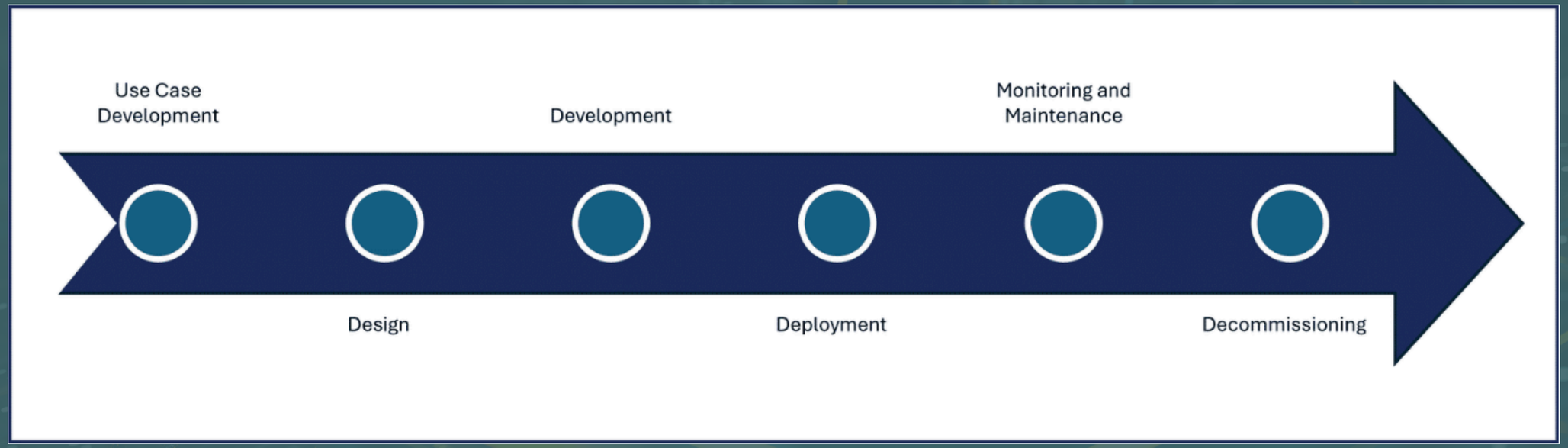
AI SOLUTION DEVELOPMENT



ref: ISACA AAIA Official Review Manual

- Secure by design
- Privacy by design

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CONVENTIONAL SOFTWARE TESTING FOR AI

A/B Testing

Unit and Integration Testing

Code Review

Black Box Testing

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AI SPECIFIC TESTING

Bias Testing

Adversarial Testing

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AI Operation

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SUPERVISE AI

Some AI has ability to act independently and make decision

- Logging and Monitoring
- Human in the Loop (HITL)

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LOGGING AND MONITORING

Challenges:

- Nano decisions
- Review log manually is impractical

Ans: Log Balancing

Audit Trails (Example):

- Data inputs

- Model parameters and versions
- Data outputs

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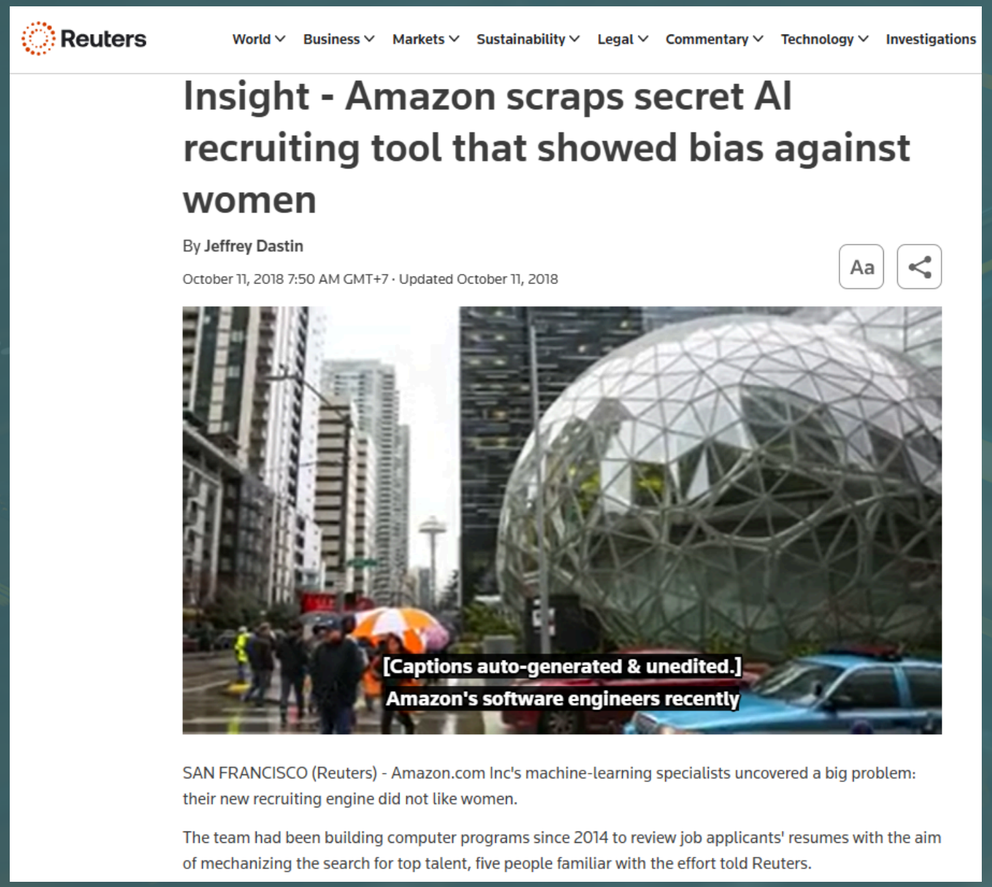
HUMAN IN THE LOOP (HITL)

- Auditor use AI to write report
- Amazon developed an AI hiring tool that showed bias against women



Reuters

World Business Markets Sustainability Legal Commentary Technology Investigations

Insight - Amazon scraps secret AI recruiting tool that showed bias against women

By Jeffrey Dastin

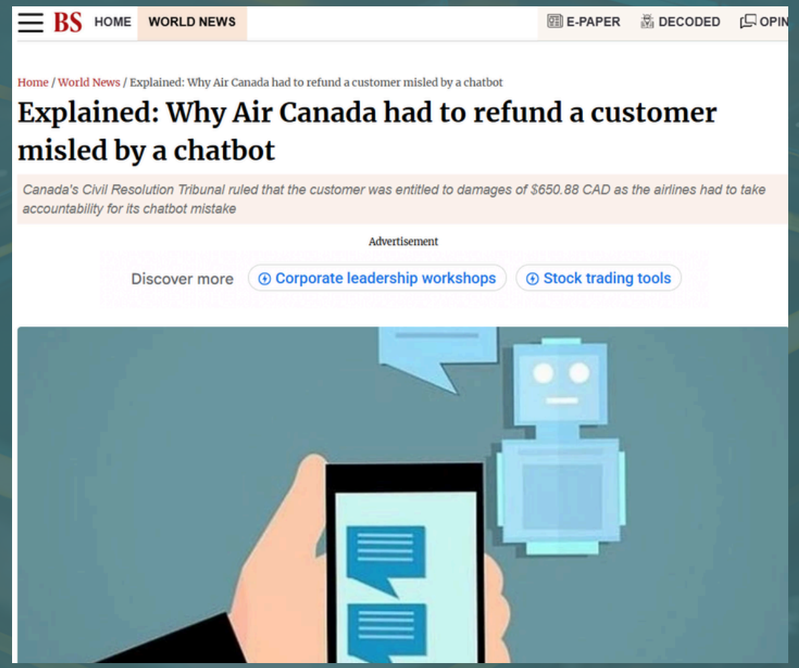
October 11, 2018 7:50 AM GMT+7 · Updated October 11, 2018

Aa

[Captions auto-generated & unedited.]
Amazon's software engineers recently

SAN FRANCISCO (Reuters) - Amazon.com Inc's machine-learning specialists uncovered a big problem: their new recruiting engine did not like women.

The team had been building computer programs since 2014 to review job applicants' resumes with the aim of mechanizing the search for top talent, five people familiar with the effort told Reuters.



BS HOME WORLD NEWS E-PAPER DECODED OPIN

Home / World News / Explained: Why Air Canada had to refund a customer misled by a chatbot

Explained: Why Air Canada had to refund a customer misled by a chatbot

Canada's Civil Resolution Tribunal ruled that the customer was entitled to damages of $650.88 CAD as the airlines had to take accountability for its chatbot mistake

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Auditing AI (1st Step)

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AUDITING AI - STARTING POINT

1. Identified High Risk AI
2. AI Policy
3. AI AUP
4. AI Inventory
5. AI Risk Management & Control
6. AI Governance Board
7. AI Awareness and Training

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AUDITING AI CONTROL (AUDIT PROGRAM)

1. AI Governance
2. Technical Security and Privacy
3. AI Solution Development
4. AI Operation Management
5. Model Assessment
6. Ethical Assessment
7. Bias and Fairness Assessment
8. Transparency and Explainability
9. HITL
10. Compliance Assessment

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