

Building an AI-Ready Workforce

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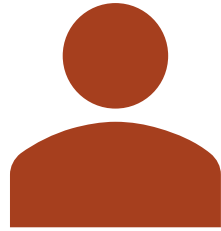
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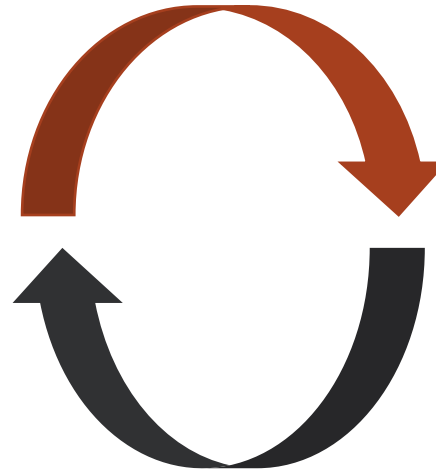


The Effects of AI on Security Professionals

Security Professional



Workload Reduction
Increase Efficiency
More Time for Analysis



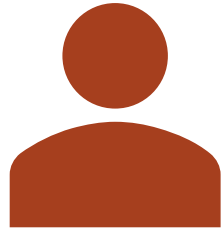
AI



Video surveillance and monitoring
Intrusion Detection
Predictive Maintenance
Response
Open-Source Intelligence
Education

The Effects of AI on Security Professionals

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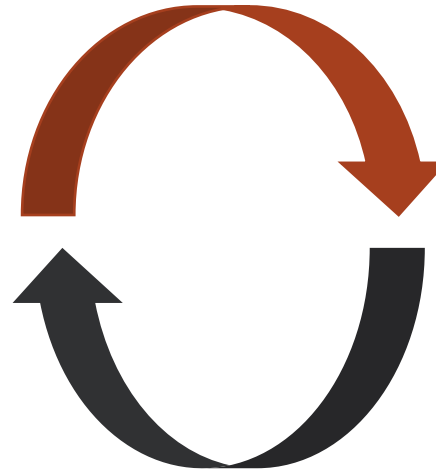


Monitoring AI Performance

Output Evaluation

Providing Feedback

Additional skill sets



AI



Video surveillance and monitoring

Intrusion Detection

Predictive Maintenance

Response

Open-Source Intelligence

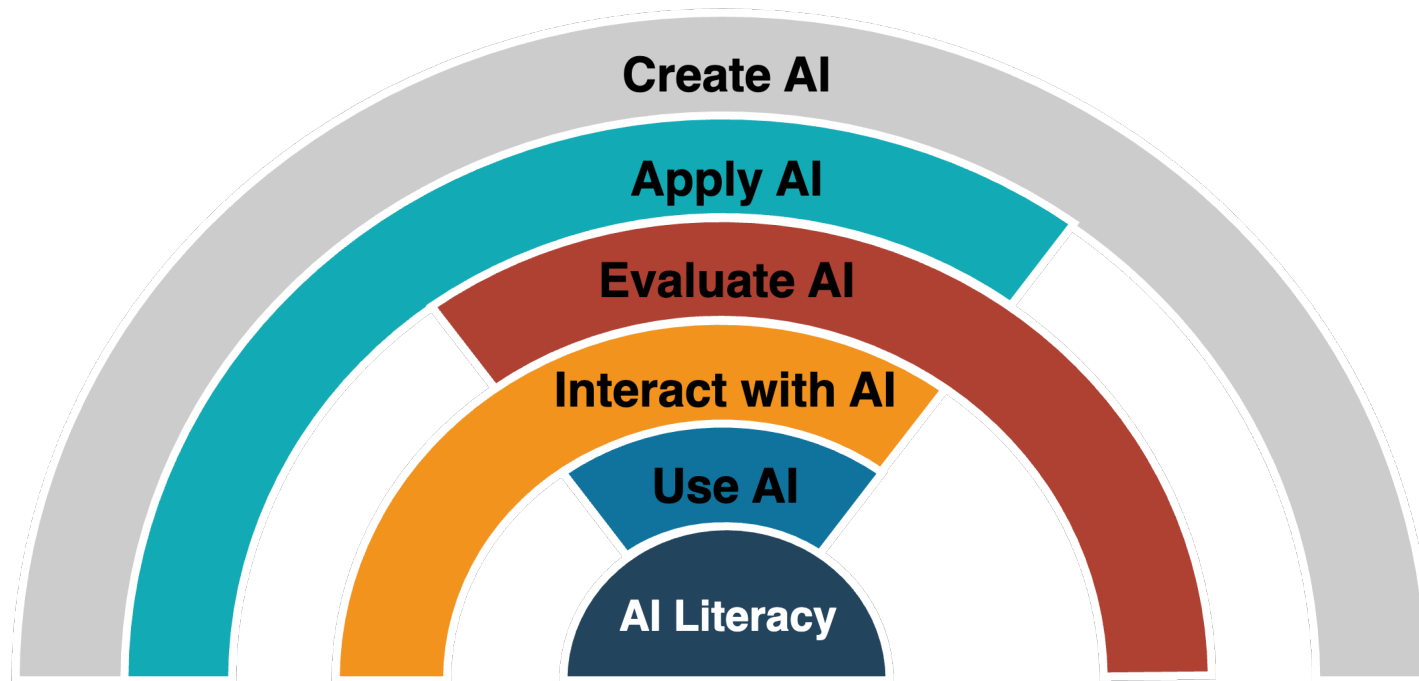
Education

AI Literacy

- "A set of competencies that enables individuals to critically evaluate AI technologies, communicate and collaborate effectively with AI; and use AI as a tool online, at home and in the workplace"
 - Long and Magerko, 2020
- This is not the same as programming literacy
- AI Literacy is a key competency for everyone as the AI landscape continues to evolve

AI Literacy

- There's a spectrum of AI literacy skills staff may need.
 - Different roles will require different levels of AI literacy depending on roles and responsibilities.
 - There may also be new roles that evolve as AI is incorporated.



AI Literacy

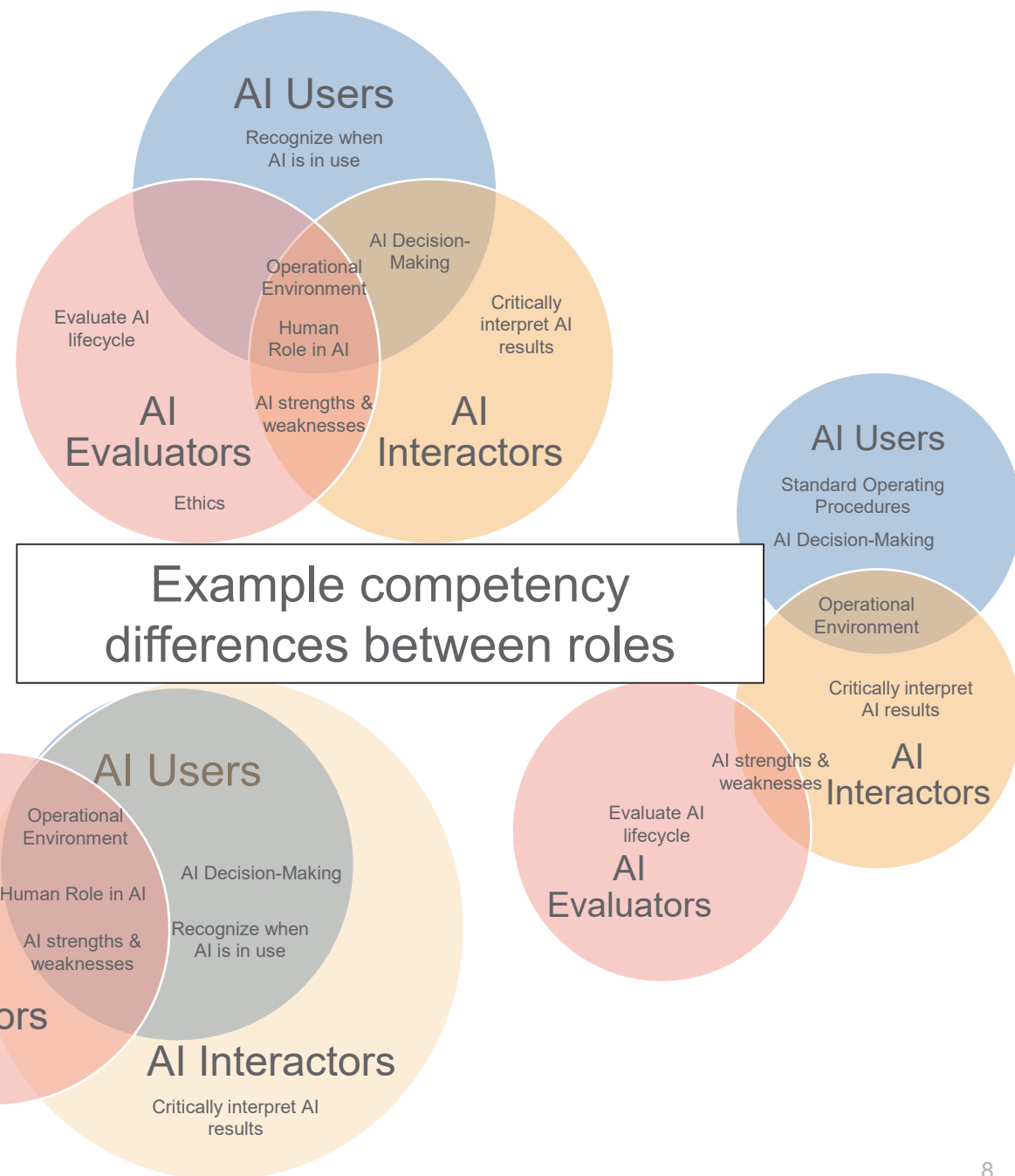
- **Create AI:** Know the fundamental theory and operations of AI, how to research and develop novel AI.
- **Apply AI:** Extending novel AI research for implementation and deployment for users; product developers.
- **Evaluate AI:** Understanding the fundamentals of AI enough to evaluate the validity and applicability of an AI product for use.
 - Here, we include ethical evaluation in this category.
- **Interact with AI:** Interface with the AI to generate results in combined, human-in-the-loop workflow. This also includes real-time quality control.
 - Examples: Chatbot interactions for knowledge retrieval
- **Use AI:** Directly use results derived from AI products with limited knowing interaction with the inner workings or underlying concepts of the AI.
 - Examples: Autocorrect, surveillance

New Responsibilities Across AI Literacy Spectrum

- Additional skills for **AI Users**:
 - Understanding how and where AI integrates into larger workflow
 - Appropriately using AI output
- Additional skills for **AI Interactors**:
 - Identifying signs and symptoms of AI failure
 - Understanding AI use case as designed
- Additional skills for **AI Evaluators**:
 - Understanding how and where it makes sense to integrate AI
 - Understanding AI limitations
 - Evaluating AI performance for product selection

How do we get there?

- Training *can* and *should* be different for different AI Literacy needs
- New roles, like AI Assurance Officers, may evolve as AI use increases
- Adjusting roles and expected AI core competencies to match with AI interaction will reduce the barriers to understanding and implementation for everyone



How do we get there?

- **AI Users:**

- Train in context with hands-on examples
- Train to identify specific cases of potential AI failure as it applies within user's workflow

- **AI Interactors:**

- Encourage training via interaction with AI inputs, outputs, and product developers
- Encourage critical thinking and train to identify signs and symptoms of AI failure
- Train to pre-empt AI failure by recognizing AI limitations

- **AI Evaluators:**

- Training should cover a variety of AI topics across the ML lifecycle
- Encourage critical examination of what defines an AI task versus a human task

Key takeaway: It will take work to implement AI safely and effectively across all roles!

Thank you



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