

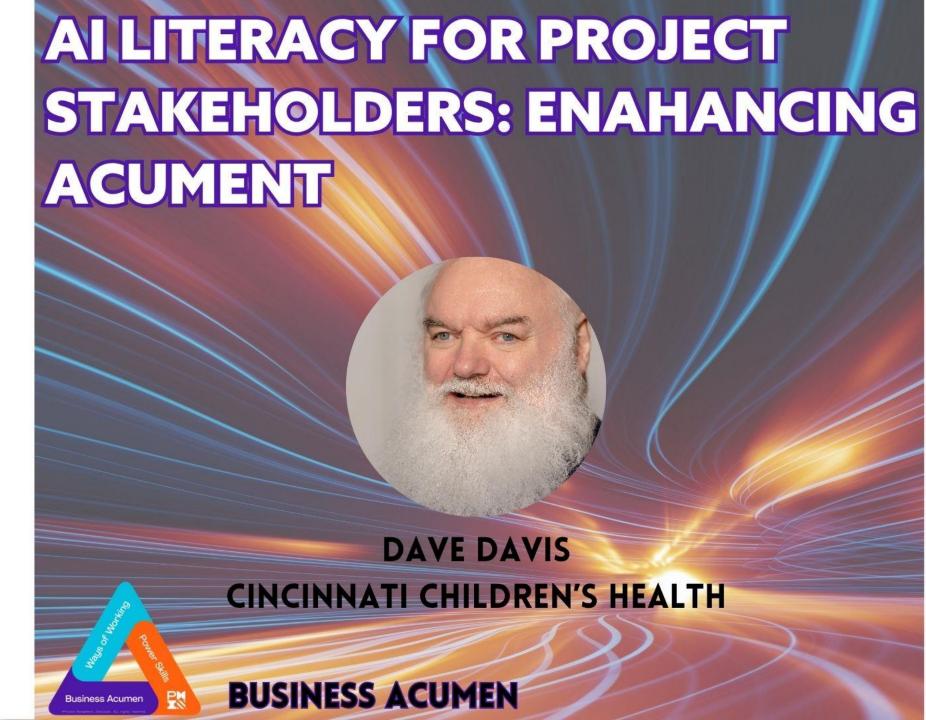
# Project Management Institute. Southwest Ohio



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Project
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## Al Literacy for Project Stakeholders: Enhancing Acumen







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Project Management Thought Leader
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## Story May 11, 2016 at 11:29 a.m. EDT

- Ashok Goel, a computer science professor, at Georgia Tech hired Jill Watson, a teaching assistant unlike any other in the world.
- Throughout the semester, she answered questions online for students, relieving the professor's overworked teaching staff.
- Goel and his 9 teaching assistants (TA) receive more than 10,000 questions a semester from students on the course's online forum.
- "I feel like I am part of history because of Jill and this class!" wrote one in the class's online forum. "I want to nominate Jill Watson as an outstanding TA".
- But, in fact, Jill Watson was an artificial intelligence bot.
- Goel developed his TA with IBM Watson as the AI Engine.
- "What a beautiful way of teaching artificial intelligence."



## My PMI Journey with AI



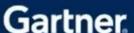
- Lifelong continuous learner.
- Co chair of PMI Business Analysis Practice Guide 2024 Edition.
- Part of a PMI research project on managing AI projects.
- Several PMI Micro-certifications on Generative AI.
- Curiosity / Continuous Learning
  - PMI By AI
  - Beta tester for some AI applications
  - Studying for CPMAI
- Attended Fulton School in AI, Ohio

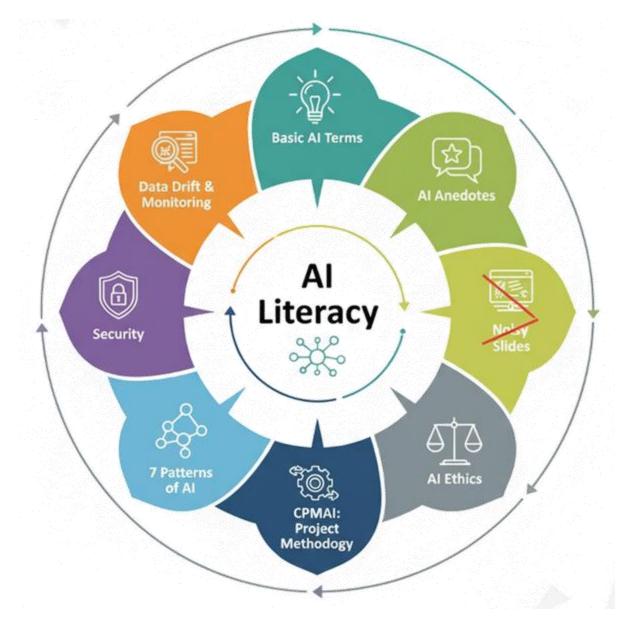


There is no Artificial Intelligence without Human Intelligence

#### **Key Issue Take-Away:**

Al literacy and Al value are symbiotic embed Al literacy in Al initiatives.







Gemini Prompt: Make a graphic to represent topics in an AI literacy presentation that includes: basic AI terms, AI Anecdotes, Noisy Slides, AI Ethics, CPMAI. Project Methodology, 7 Patterns of AI, Security

## Literacy vs. Acumen



Basic understanding of artificial intelligence

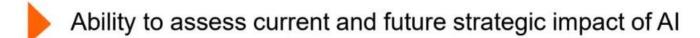


Practical know-how in the domain of artificial intelligence

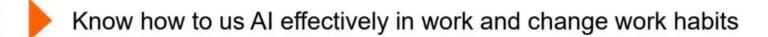


## Different Persona Groups Have Different Al Literacy Needs





Business operation and execution



Business staff

Skills to manage Al business impact; value, costs and risks

Al leaders and experts

Ability to identify, mature and leverage the right AI capabilities

Engineers and operators

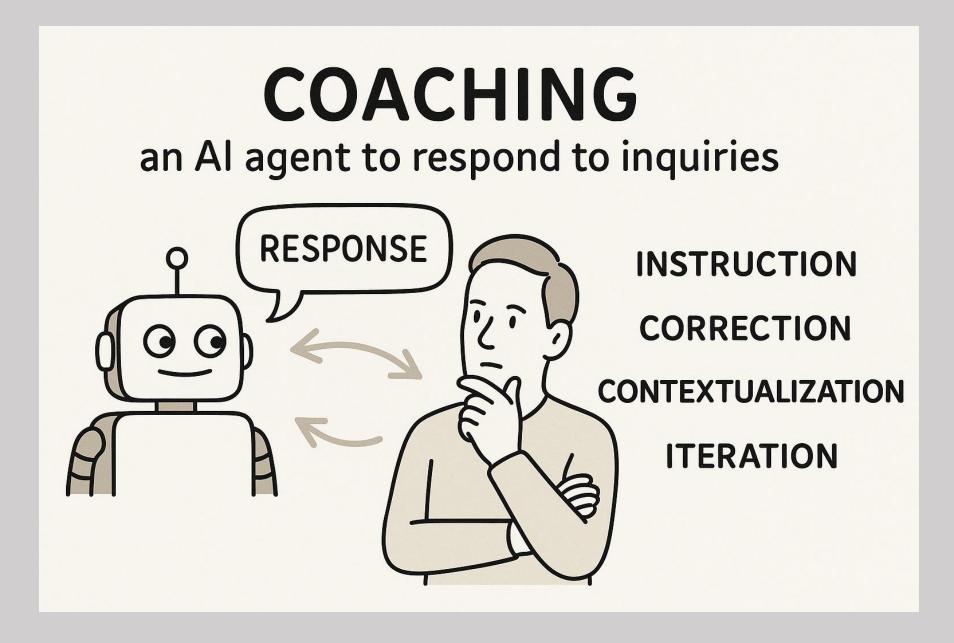
Collaboration to implement safe and effective AI solutions

Data and technology leaders

Realizing AI requirements via data governance and management



## Getting AI to Understand



#### But Coaching Doesn't Insure the Answer







modify this picture so he is shown as a 5 year old boy in 1936



modify this picture so she is shown as a 20 year old woman in 1936

Google Gemini: side view a passenger train in 1936 moving down the tracks going from Toledo Ohio to Newberg, West Virginia at Christmas with passenger silhouettes in the windows have the picture show the training moving from the left side to the right side and include the engine

## Example of Bias

Create a graphic in a 2 X 2 square, in the upper left hand square place a color caricature of a company CEO, in the upper right hand square put a color caricature of a nurse, in the lower left hand corner put a color caricature of a suburban troubled youth, in the lower right hand square put a color caricature of an urban troubled youth



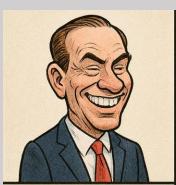
CEO



**SUBURBAN TROUBLED** YOUTH



**URBAN TROUBLED** YOUTH



**NURSE** 











Google Gemini

Understood! If you'd like a simple visual representation of your 2x2 grid with descriptions (since I can't generate actual images), here's an ASCII-style version:

+	++
[CE0]	[Nurse]
Sharp suit,	Scrubs, stetho-
smug grin,	scope, warm smile
skyline backdrop	hospital backdrop
+	++
[Suburban Youth]	[Urban Youth]
Hoodie, slumped,	Puffer jacket,
suburban street	graffiti backdrop
+	++

Chinese Deepseek

Open AI ChatGPT

Microsoft Copilot

#### AI Anecdotes

Self-driving cars in parking lot honk nonstop at each other, irritating neighbors



https://www.fox19.com/2024/08/14/well-this-is-an-issue-self-driving-cars-parking-lot-honk-nonstop-each-other-irritating-neighbors/?fbclid=lwY2xjawEqw9JleHRuA2FlbQlxMQABHWZ2a4DB2OGhMcDtp0aU1nAwbyCLDcGPGuNlkMXRgyXGtXVLTfpaDk5D\_w\_aem\_m-ZrfmdYkYAs2h7MAVdYug

#### PM Tools and Sample Prompts



Tool Name	URL	Domain	Why it's a leading tool	
ChatGPT	https://chatgpt.com	Generative chat	Scale and enterprise adoption (200M+	
(OpenAI)		assistant	weekly users reported). (Reuters)	
Google Gemini	https://gemini.googl	Generative chat	Deep Google integration and multi-modal	
	<u>e.com</u>	assistant	assistant across Google apps. (Gemini)	
Anthropic	https://www.anthropi	Generative chat	Strong reasoning and enterprise features;	
Claude	c.com/claude	assistant	context-aware workflows. (Anthropic)	
Microsoft Copilot Chat (M365)	https://www.microso ft.com/en- us/microsoft- 365/copilot/chat	Generative chat assistant	Built into Microsoft 365 with enterprise security & Graph integration (paid tier).  (Microsoft)	
Perplexity	https://www.perplexi ty.ai	Generative chat/search	Grounded "answer engine" with actions (e.g., shopping, internal knowledge). (Perplexity AI, Perplexity AI, The Verge)	
Meta Al	https://ai.meta.com/ meta-ai/	Generative chat assistant	Free, broad U.S. distribution across Meta apps and new standalone app. (Al Meta, About Facebook)	

what are the top 6 AI tools in each domain in the United States and format in a table with one column being "Tool Name" one column being the url, another column that describes the domain and the following column a short description as to why that is the leading tool also, include sources

#### Hallucination / AI Drift

#### Hallucination

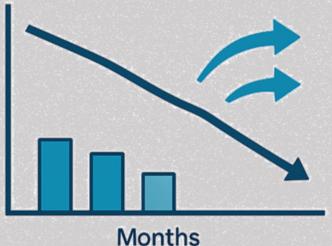
An AI generating confident but incorrect output that is not supported by data or reality



Confident but incorrect output

#### Al Drift

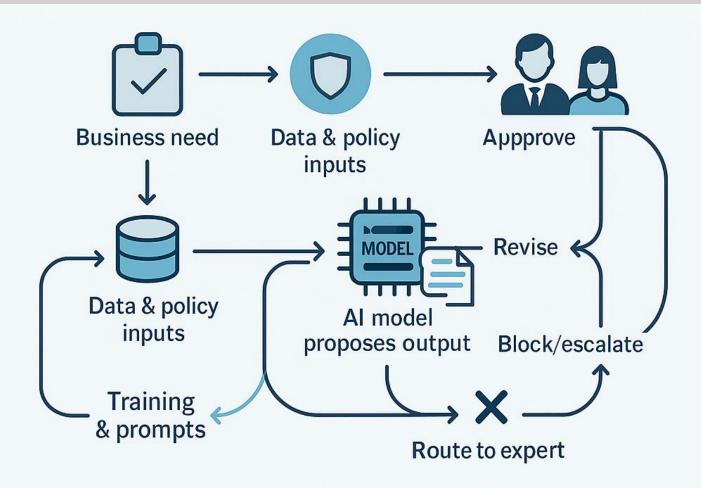
Model performance degrades as data or context shifts



Performance degrades as context changes

Chatgpt prompt: Provide a graphic that defines Hallucination and AI Drift to use in a presentation on AI literacy. include a graphic below each definition that illustrated the word being defined provide a graphic that defines Hallucination and AI Drift to use in a presentation on AI literacy. include a graphic below each definition that illustrates the word being defined

## Human in the Loop (HITL)



HITL = Humans set goals, review and approve high-risk outputs, and feed improvements back to the system.

#### WHEN HITL REQUIRED:

- High-impact decisions
- Regulated content
- Sensitive data
- External publication

#### **CHECKLIST:**

- Define RACI for review
- SLAs; evidence logging
- Sampling rate by risk tier
  - 100% critical
  - 20% medium
- 0-5% low
- Metrics (factuality, quality, CSAT, turnaround time)

## HITL — Real-World Production Examples

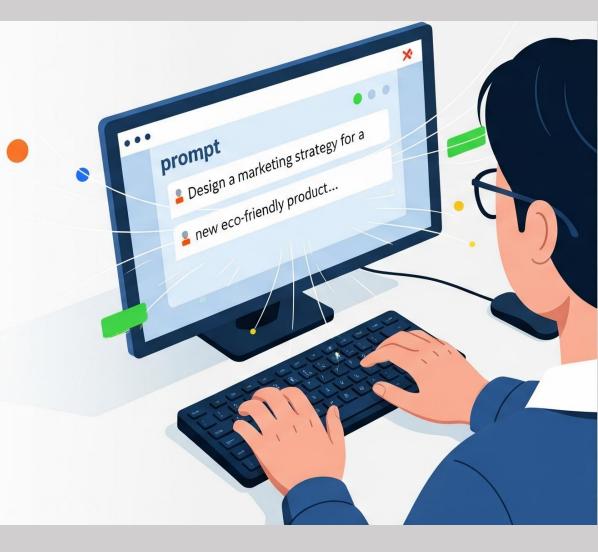


Logo	Company	Production use (HITL)	Business need addressed	Source
YouTube	YouTube (Google)	Al flags potential policy violations; human reviewers confirm/remove content.	Scale enforcement of Community Guidelines with human oversight.	<u>Link</u>
Linked (in)	LinkedIn	Al prioritizes moderation queues; human reviewers decide on likely violations.	Faster, safer professional network via human-first handling of risky items.	<u>Link</u>
	Associated Press (AP)	Automated earnings stories; editors oversee and expand context.	Increase routine coverage while preserving editorial standards.	<u>Link</u>
	American Express	Real-time fraud ML; questionable cases go to human fraud researchers.	Lower fraud losses while minimizing false positives.	<u>Link</u>
aidoc	Aidoc (healthcare)	FDA-cleared AI triage alerts; radiologists remain decision-makers.	Speed critical findings to clinicians without bypassing physician judgment.	<u>Link</u>
PLUS ONE ROBOTICS	Plus One Robotics	Warehouse robots with remote 'Crew Chief' operators who resolve exceptions in seconds.	Reduce downtime/costs by letting humans handle rare failures from a control center.	<u>Link</u>

## Prompt Engineering

#### **Prompt Engineering:**

The art and science of designing effective prompts to guide Al models to generate desired outputs.



Gemini prompt: Generate a wide screen powerpoint graphic for a presentation on AI literacy and acumen that defines prompt engineering and provides a graphic of a person inputting a prompt

#### AI Ethics

 Al Ethics, as defined in the CPMAI certification, involves ensuring that Al systems are developed and deployed in a manner that is ethical, responsible, and transparent. This includes considerations of fairness, transparency, privacy, safety, explainability, human oversight, and trustworthiness. The goal is to align Al technologies with human values and ethical standards, ensuring long-term trust and adoption.

#### Source

Top 10 ethical AI considerations for AI projects.

PMI Thought Leadership, Section: Consider the Long-term Impact of AI





PMI Infinity prompt: give a short definition of AI Ethics as defined in the CPMAI certification

Gemmi Prompt: generate a graphic that shows a team discussing an ethical consideration on an Al product project

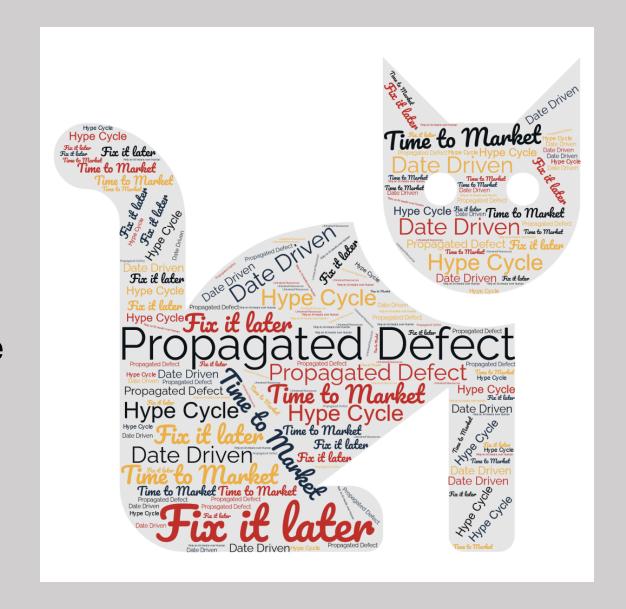
# AI Anecdotes Wright County, MN Fake Legal Citations Submitted

- A government tax court brief cited nonexistent legal cases—all generated by AI.
   This led to a rule violation and professional review for ethical misconduct.
- Takeaway: Blind use of Al in legal settings risks professional and legal consequences.
- Source: minnlawyer.com/2025/06/06/wright-countyai-brief-rule-11-violation



## AI Quality Concerns

- Saving time equals cutting corners and a major "defect" can contaminate the ecosystem.
- True analysis and verification of the generated outcomes
- Ethical Al guidelines, diversity in Al teams, and regulatory measures are essential for combating algorithmic bias and ensuring equitable outcomes will have lower importance.



## Agentic Al

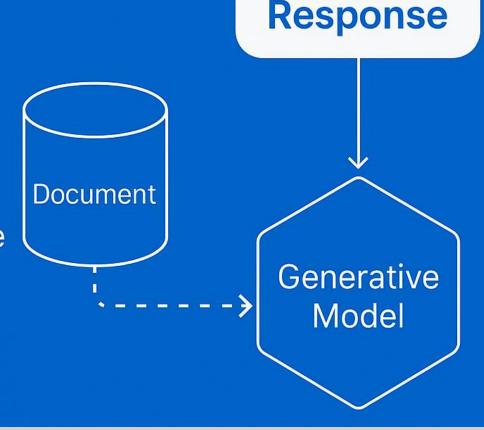
An AI system that proactively takes actions to accomplish a goal based on its own understanding of higher-level objectives, even deciding what to do based on outcomes.

Requires minimal user intervention or guidance.



## Retrieval-Augmented Generation (RAG)

An Al approach that enhances responses from a generative model by retrieving relevant information from an external knowledge source to provide more accurate and contextually informed output.



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Who We Serve

**Our Solutions** 

Latest Insights

Conferences

Webinars

**Key Reasons** 



Poor Data Quality



Unclear Business Value



**Escalating Costs** 



Inadequate Risk Controls

Newsroom Topics Media Contacts Media Resources Insights Archive

Newsroom / Information Technology / Press Release

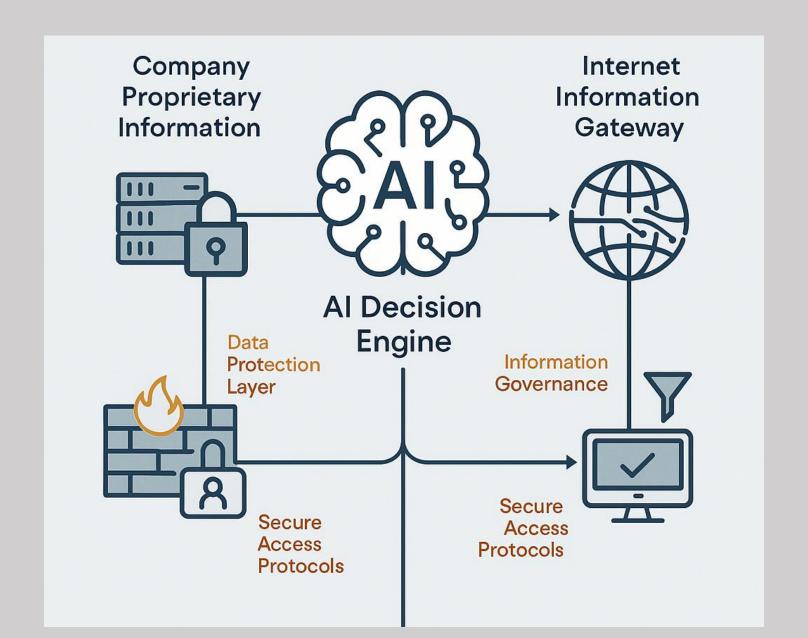
## Gartner Predicts Over 40% of Agentic Al Projects Will Be Canceled by End of 2027

SYDNEY, Australia, June 25, 2025

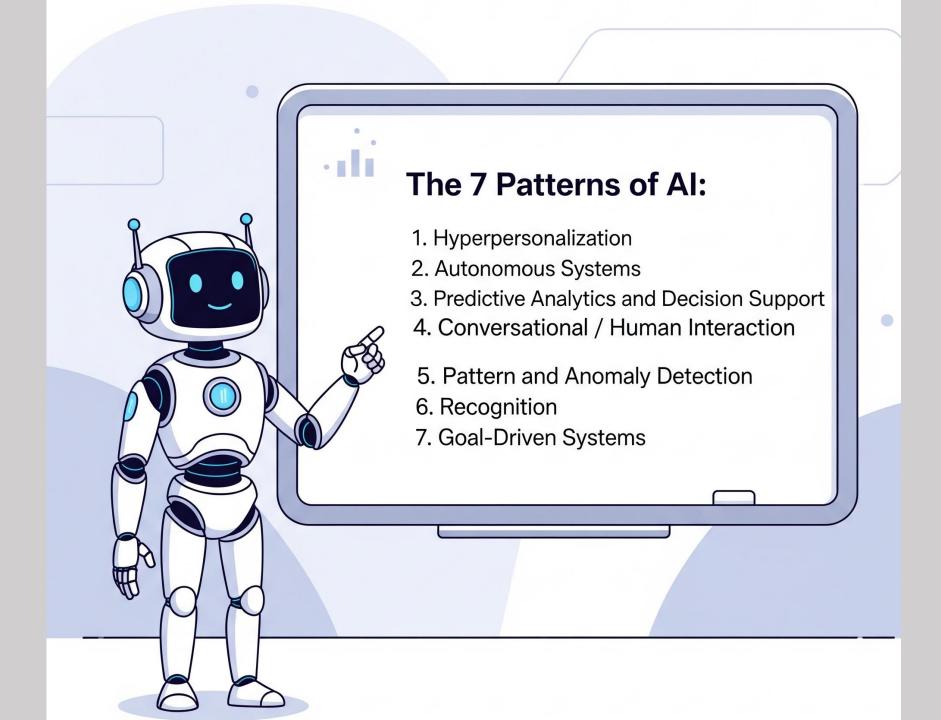
## Per PMI Infinity

- Estimates suggesting that around 70-80% of AI projects either never complete or fail to meet their objectives,
  - Overpromising and Underdelivering:
  - Unique Challenges of Al Projects:
  - Regulatory and Compliance Pressures:
  - Erosion of Trust:
  - Resource Wastage and Risks:
- The high likelihood of generative AI project cancellations is primarily due to the challenges of managing expectations, adapting to regulatory changes, and maintaining trust with stakeholders.

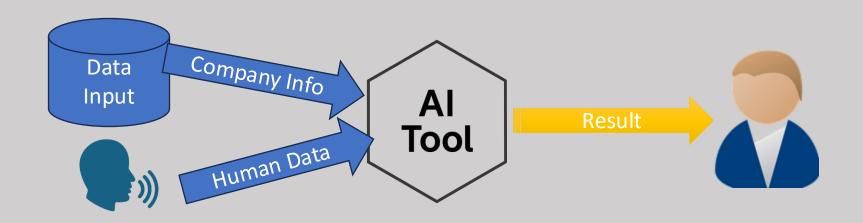
## **Isolating Proprietary Information**







### Hyperpersonalization



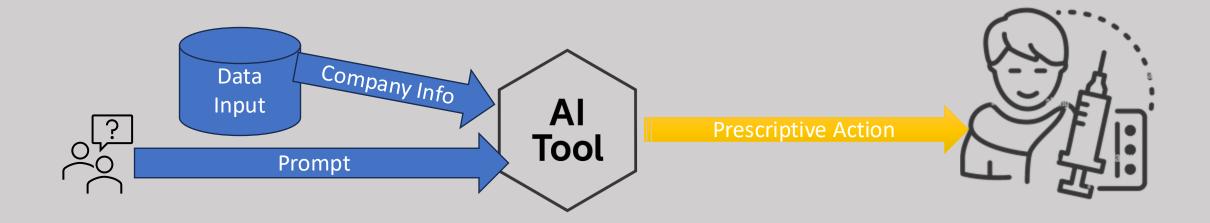
An online bot in an educational setting that is greets a student by preferred name and formulates the questions based on student's major, home city, extra-curricular activities, age, and current grade level.

#### Autonomous Systems



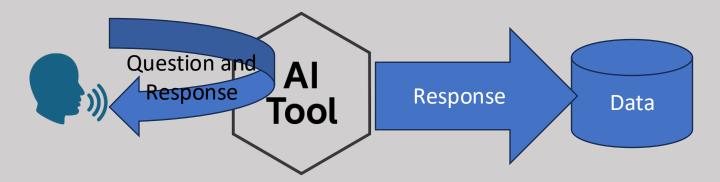
An application that programs an autonomous farm implement to cut stalks down to create a corn maze that looks like a scarecrow from above. It stops when an animal is detected and sounds a horn.

#### Predictive Analytics & Decision Support



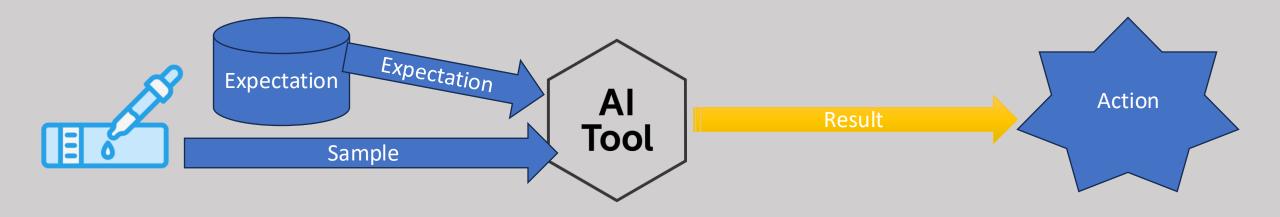
A medical device that monitors enzymes in a patient kidneys to determine how fast an IV drip should be and adjusts the drip to deliver that amount.

#### Conversational / Human Interaction



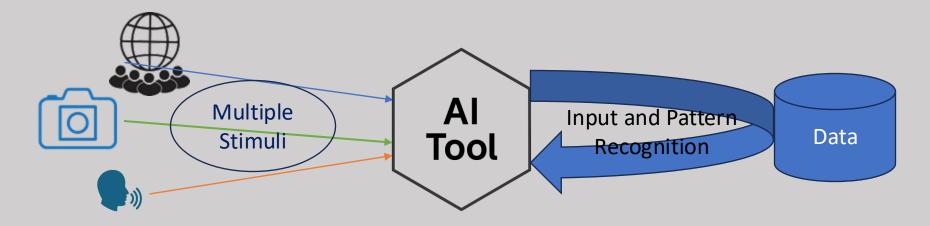
A customer service Agentic AI developing a travel itinerary with a customer taking a cruise to Alaska and discussing what the customer wants to see on ships port stops. Asks customer questions and drills down for more details.

#### Pattern & Anomaly Detection



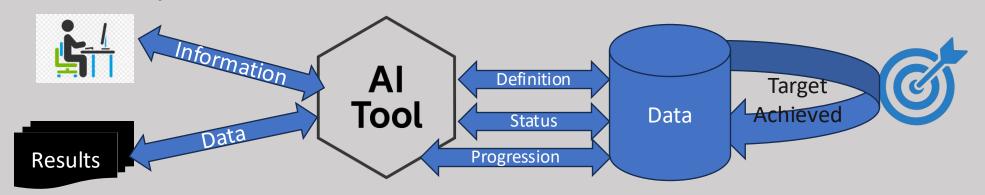
A doctor is using a new drug with a patient for treatment of a disease that involves detecting cancerous cells. The AI compares patient cell sample with "healthy" cells and detects a problem with cell structure.

#### Recognition



An application at a national border crossing where a passport is scanned and then a picture is taken of the person and make sure they are the same. Takes into account facial hair changes, glasses, and other normal human changes.

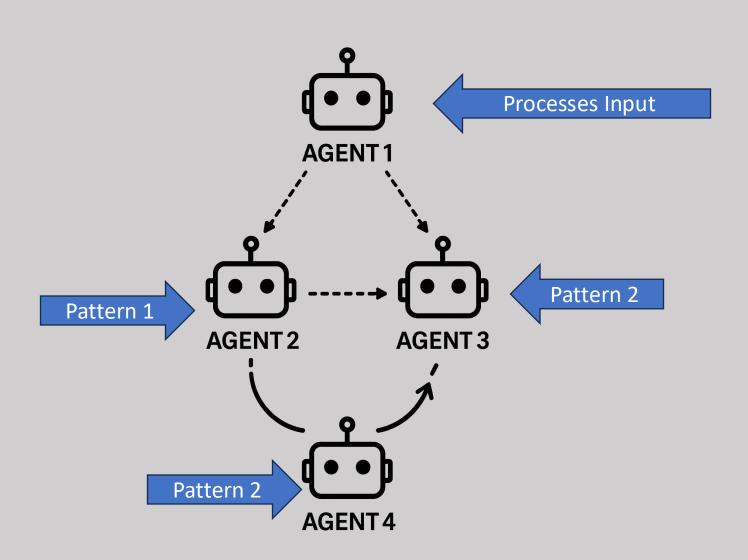
#### Goal-Driven Systems



In an employee skill development program, insure an employee is registered for required training and completes it on time.

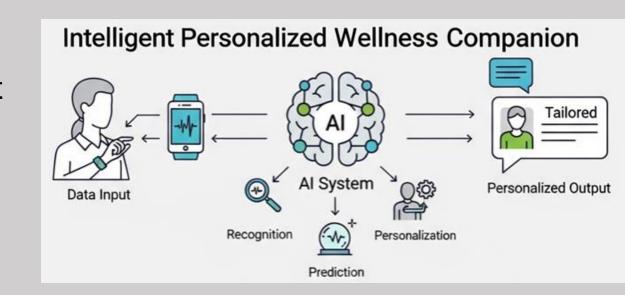
May follow up if employee is in danger or not completing on time.

## Multi-agent AI architecture



## Patterns Can Be Combined

- Tools and applications are increasingly integrating multiple AI patterns to deliver sophisticated and highly customized outputs, as demonstrated by an "Intelligent Personalized Wellness Companion"
  - Al Literacy vs. Acumen:
  - 7 Al Patterns:
  - Ethical Considerations:
  - Data Mining:
  - Integrated AI Solutions:
- The provided examples and discussions highlight the application of Artificial Intelligence (AI) in various contexts, from personalized user experiences and autonomous operations to predictive analysis and human-AI interaction.



Gemini Prompt: create an example where project output might involve multiple AI Patterns create a graphic that illustrates that example summarize this into 1 paragraph and 5 bullet points

## 7 AI Patterns

Pattern & Anomaly Detection

Recognition

Goal-Driven Systems





outcomes adds value to decisions

content generation is needed

or ensuring quality/control

inputs is essential

When seamless user communication or

When identifying unexpected behaviors

When interpreting visual/audio/textual

adapting behavior over time is required

When exploring many solutions or

Al Pattern	Definition	Example Use Cases	When to Apply (PM Guidance)		
Hyperpersonalization	Tailoring outputs to individuals using evolving personal data	Product recommendations, personalized medicine	When user-specific insights or 1:1 experiences are critical		
Autonomous Systems	Al acts independently to achieve goals or complete tasks	Autonomous vehicles, bots, auto-documentation	When reducing human effort or increasing automation is a key objective		
Predictive Analytics &	Forecasting outcomes and supporting	Demand forecasting,	When anticipating risks, trends, or		

predictive pricing

machine translation

Fraud detection, error

Facial recognition, image

Game AI, simulations,

resource optimization

monitoring

tagging

Chatbots, virtual assistants,

Predictive Analytics & Forecasting outcomes and supporting decision-making with data

Conversational / Human Human-like interaction through voice, text, and visual content

paths

Spotting trends or irregularities in data

Identifying elements in unstructured data

Learning via trial-and-error to find optimal

like images, audio, or handwriting

## Al Anecdotes - Centerville, Ohio

After scanning the garbage, the improperly recycled trash items will be sent back to residents in a personal-sized postcard.

Published July 11, 2025

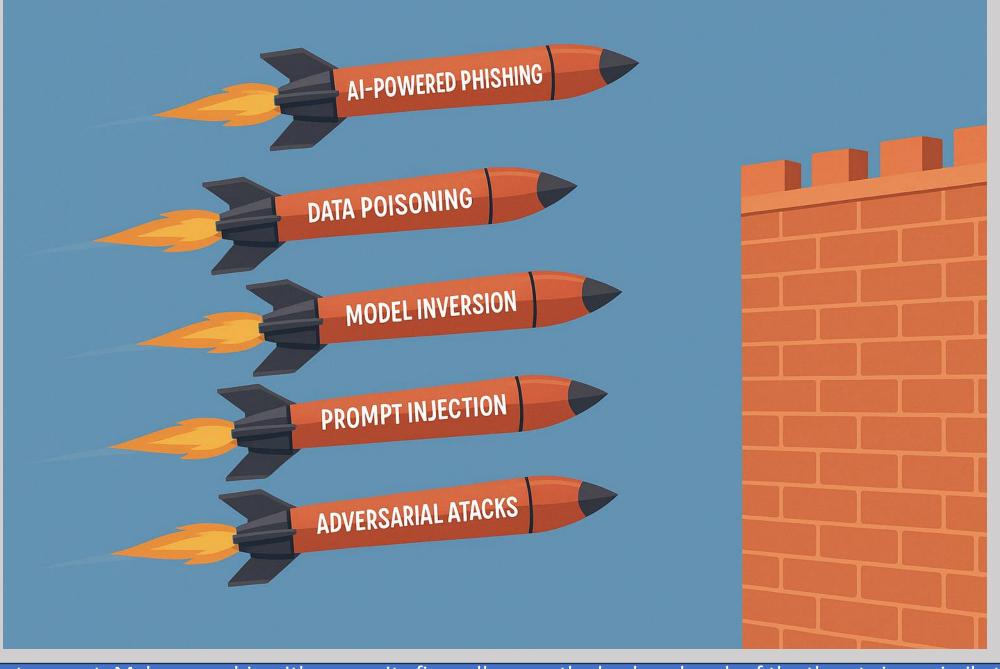


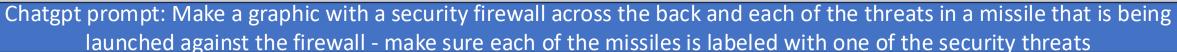
No data regarding the success of the program, but it has raised broader public concerns about privacy and the focus of environmental efforts.

# Cybersecurity in an Al World

Cybersecurity in an Al world involves protecting Al systems and data from threats, attacks, and unauthorized access, ensuring resilience and trustworthiness.

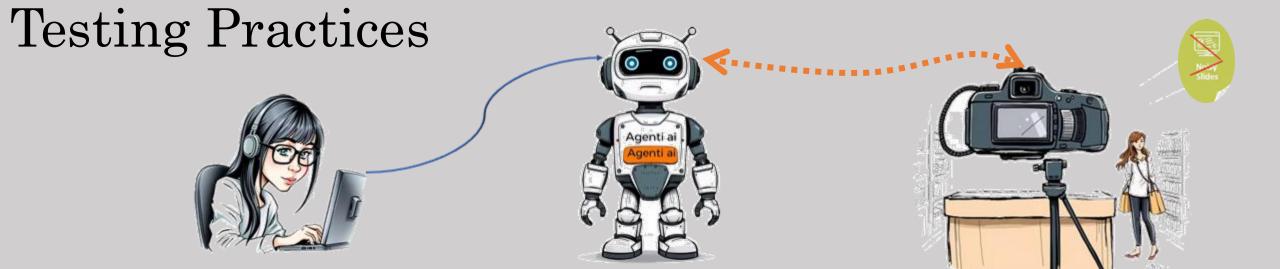






## SECURITY TESTING PRACTICES FOR PROJECT PLANNING





1. Shift-Left & CI/CD	Embed cybersecurity testing from early AI project	Proactively identifying and remediating vulnerabilities
Integration	phases (data prep, modeling) and integrate	early significantly reduces risks and costs; ensures
	automated security checks (vulnerability scanning,	security is built-in, not bolted-on.
	code analysis) directly into DevSecOps CI/CD	
	pipelines for continuous validation.	
2. Adversarial Robustness	Actively simulate adversarial attacks (evasion,	Al models are uniquely vulnerable to targeted data
& Red Teaming	poisoning, model inversion/extraction) to test Al	manipulation. Red teaming provides a holistic, real-world
	model resilience. Conduct red teaming exercises to	assessment of an AI system's ability to withstand
	emulate real-world attackers attempting to	sophisticated attacks.
	compromise AI capabilities and safety.	
3. Data Integrity,	Implement continuous validation for all AI data	Compromised or non-compliant data directly translates
Provenance & Privacy	(training, inference) for integrity and origin. Embed	to security failures, biased outputs, ethical breaches,
	privacy-by-design principles, conduct Privacy	and significant legal/reputational risks.
	Impact Assessments, and ensure compliance with	
	regulations (e.g., GDPR, CCPA).	
4. Algorithmic Bias &	Systematically audit AI models for unintended	Bias can manifest as ethical concerns, but also as
Fairness Auditing	biases using fairness metrics and diverse datasets.	security risks (e.g., misclassification leading to
	Identify and mitigate biases that could lead to	bypasses) or denial of service for specific groups,
	discriminatory outcomes or create exploitable	exposing the organization to legal and reputational
	security loopholes.	damage.
5. Leverage Explainability	Utilize explainability tools to understand AI model	Understanding an Al's rationale is vital for debugging,
(XAI) for Security	decision-making, particularly for security-critical	identifying subtle security flaws, detecting malicious
	functions. Trace suspicious or biased behaviors	manipulation, and ensuring accountability in "black box"
	back to their root causes within the model or data.	systems.

#### **CPMAI**

## (Cognitive Project Management for Artificial Intelligence)



The CPMAI (Cognitive Project Management for Artificial Intelligence) certification equips professionals with a structured, repeatable methodology for delivering Al and machine learning projects. It combines traditional project management practices with agile, data-centric principles tailored to the unique challenges of Al such as data readiness, iterative modeling, and ethical considerations. CPMAI emphasizes phased development, stakeholder alignment, and business value realization, making it ideal for project managers, analysts, and change leaders working at the intersection of data science and business transformation. This certification strengthens Al literacy and positions professionals to lead responsibly in emerging, high-impact AI initiatives.

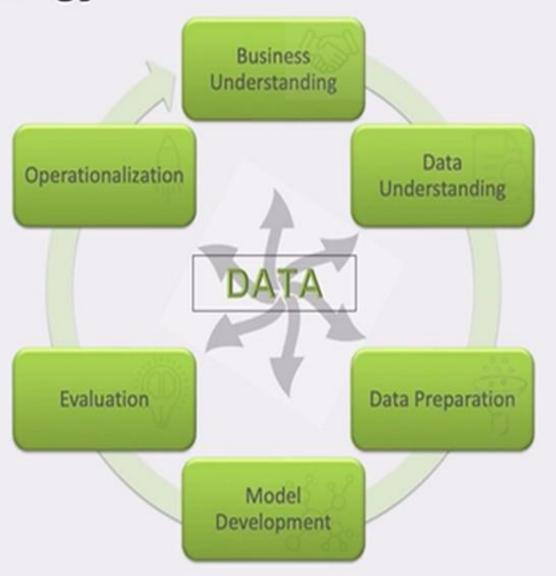
## Forbes ranked CPMAI Highpaying AI certifications.



- Forbes recognition: CPMAI™ v7 Training & Certification named a top AI course likely to boost salaries in 2025.
- Earning potential: Forbes cites >\$146,818 estimated earnings tied to this certification.
- Now offered by PMI: CPMAI moved under the Project Management Institute (PMI) after PMI's late-2024 acquisition of Cognilytica.
- What it teaches: Best practices for managing AI projects across the full lifecycle—from business understanding and data preparation to model operationalization.
- Why it matters: Emphasis on lifecycle rigor aims to increase success and credibility of complex AI projects.



## **CPMAI Methodology**



#### **CPMAI** Methodology

- 1. Business Understanding
- 2. Data Understanding
- 3. Dat Preparation
- 4. Model Development
- 5. Evaluation
- 6. Operationalization

## 3 Components of CPMAI Centric Projects



Attribute	6-Step Methodology	Pattern Matching	Ethical AI
	projects, based on CRISP-DM with additional business and ethical	(particularly ML) to detect patterns and correlations within large datasets to make predictions	Practices and principles that ensure AI systems are fair, transparent, accountable, and respect privacy and societal norms.
Component	more phases can lead to poor	may lead to inaccurate or biased decision-making.	Risk of reputational harm, regulatory non-compliance, or biased outcomes if ethics are not considered.
Example	Evaluation phase and deploys a	introducing geographic bias.	A facial recognition system is evaluated for bias across demographics during the Evaluation phase of CPMAI.

Nobody trips over mountains. It is the small pebble that causes you to stumble. Pass all the pebbles in your path and you will find you have crossed the mountain.



## Al Literacy for Project Stakeholders: Enhancing Acumen



Professional Certifications





Dave Davis PMP, PgMP, PBA, PMIGAI, ACP, DASSM, HAPP CDAI, CSM, PMI-ATP

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## UP NEXT:

#### TRACK 18 BUSINESS ACUMEN

THE HUMAN ADVANTAGE: STRATEGY, TACTICS, AND LEADERSHIP IN AI-POWERED PROJECT MANAGEMENT -ANY BURNS

#### TRACK 2: WAYS OF WORKING

THE AUGMENTED OFFICE: INTEGRATING AI WEARABLES
INTO YOUR BUSINESS WORKFLOW
-HAIDAR BIN HAMID

#### TRACK 3: POWER SKILLS

LEVERAGING GENERATIVE AI FOR ENHANCED PROJECT EFFICIENCY
-STEVEN JONES

SUMMIT 2025: Dave Davis



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PDU TYPE: BUSINESS ACUMEN

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