

The AI-Human Edge: Accelerating Human Mastery in the Age of AI

*The future of sales is partnering with AI that learns to
amplify human expertise and creativity.*

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THE AI-HUMAN EDGE



WINNING WITH INTELLIGENCE
TECHNOLOGIES-ON THE FIELD AND BEYOND

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The Dean of Big Data

Special thanks to Renee Lathi, Wei Lin, Mark Stouse, and John Thompson

Today's AI Journey: 45 Minutes, 3 Industry-changing Ideas

01

Understanding How Artificial Intelligence Works

Understand how AI learns, adapts, and optimizes decisions within dynamic environments

Module 1

02

Leverage AI to Amplify Professional Expertise

Use AI to amplify domain expertise, accelerate learning, and unlock human creativity

Module 2

03

AI-in-the-Middle: Re-engineering Healthcare

Re-engineer healthcare by matching patient needs, doctor experience, and treatment effectiveness – and learning from every interaction

Module 3

MODULE 1

Understanding How Artificial Intelligence Works

*Understand how AI learns, adapts, and
optimizes decisions within dynamic
environments*

Three AI Realities

- AI will only do what you train it to do.
- AI will *relentlessly optimize* the desired outcomes and metrics you give it.
- AI amplifies existing organizational and personal biases, prejudices, silos, and misalignment.
- Define Intentions + Desired Outcomes before building.
- Choose your metrics like they are laws — because to AI, they are.
- Fix organization problems first. AI is a magnifying glass, not a corrective lens.

Not Your Father's Analytics - AI is Fundamentally Different

Autonomous Intelligence...with Minimal Human Intervention

Continuously-learning & Adapt Products, Services, Processes and Policies
(Reinforcement Learning, GenAI/RLHF, Artificial General Intelligence)

Autonomous
Analytics

**Learning &
Adapting
Analytics**

Organization at Leveraging

Optimized Human Intelligence (Human Decision-Making)

Prescribe Actions & Recommendations
(Deep Learning, Supervised & Unsupervised Machine Learning)

Prescriptive
Analytics

DIGITAL
TRANSFORMATION

**Static
Optimization
Analytics**

Predictive Insights and Foresight

Quantify Cause-and-Effect, Predictive Behaviors
(Statistics, Clustering, Classification, Regression)

Predictive
Analytics

INSIGHTS
MONETIZATION

Operational Reporting

Monitor Operations
(Business Intelligence, Six Sigma)

Descriptive
Analytics

BUSINESS
OPTIMIZATION

**Monitoring
Analytics**

Prescriptive
Recommendations

BUSINESS
MONITORING

What is Artificial Intelligence (AI)?

Artificial Intelligence (AI) is a set of algorithms that seek to optimize actions by mapping probabilistic outcomes to utility value within a constantly changing environment...*with minimal human intervention*

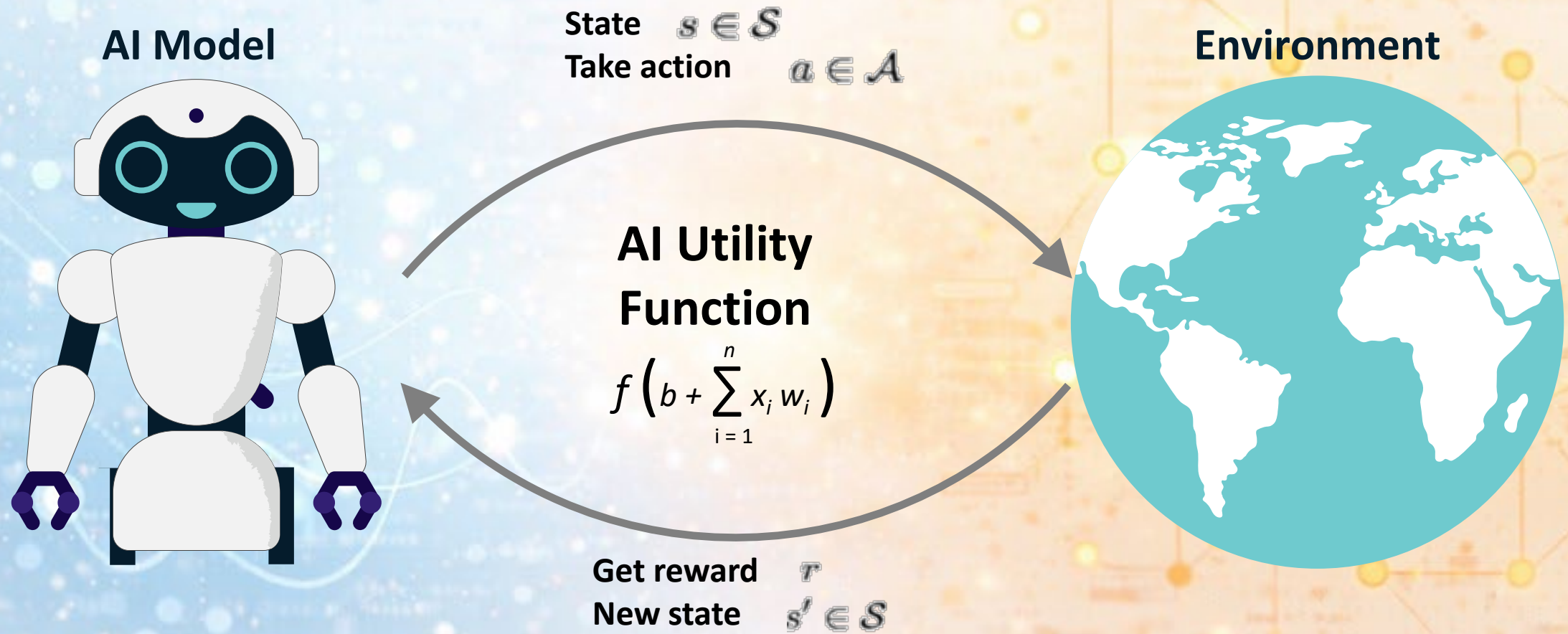
1. Seeks to **optimize actions** to achieve **Desired Outcomes** as framed by **User Intent**.
2. Interacts with **constantly changing environment**
3. Evaluates input **variables and metrics and their relative weights** to assign a utility value to specific actions (**AI Utility Function**)
4. **Measures the effectiveness** of those actions
5. **Feeds results** back to AI Utility Function
6. **Continuously learns and updates** weights and utility values of **AI Utility Function**

...with minimal human intervention



AI Models Seek to Continuously Learn and Adapt to Its Environment

AI Utility Function consists of variables, metrics, and associated weights that guide AI model's decisions, maps probabilistic outcomes to utility values, and measures decision effectiveness to continuously learn and adapt

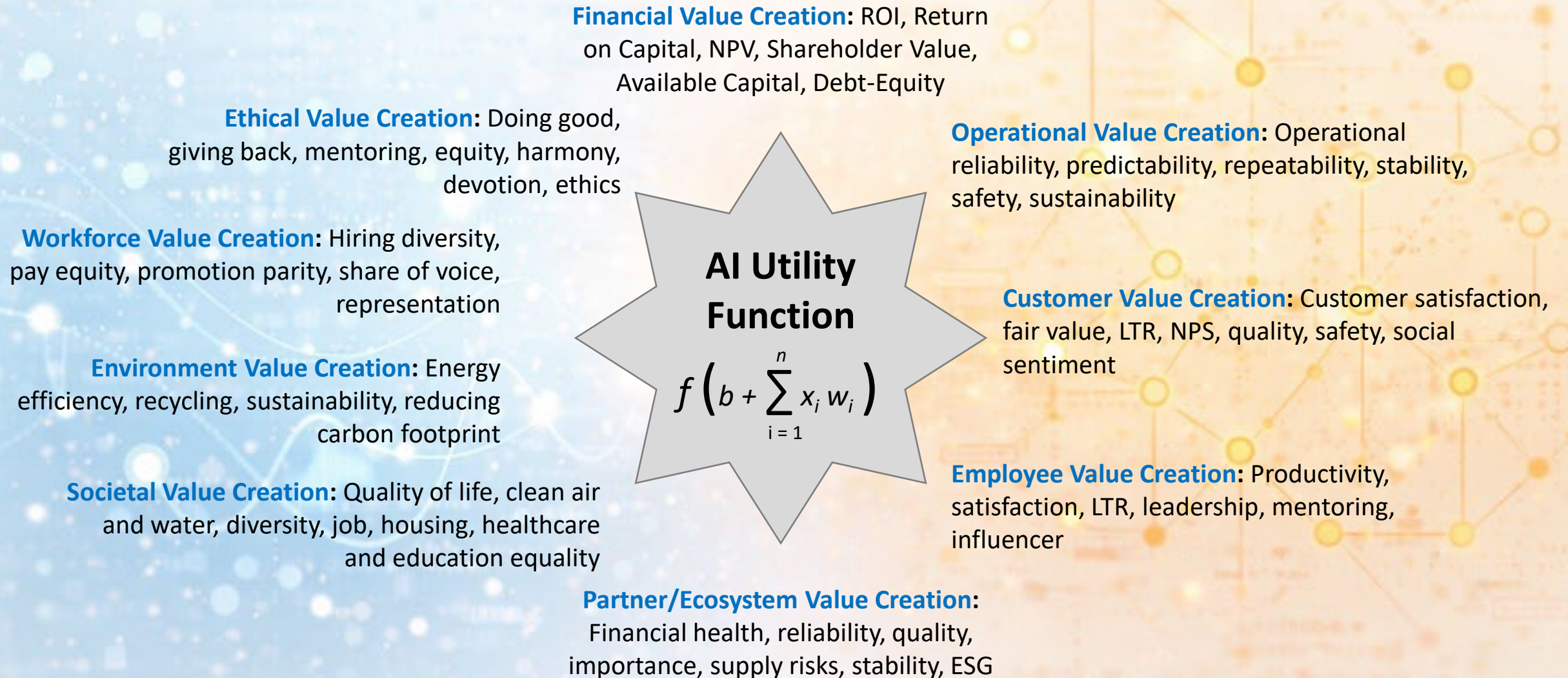


AI like children's game of "Hotter - Colder", except the prize is constantly moving...

Economic Value Framework



Defining variables and metrics that comprise **AI Utility Function** too narrowly can lead to AI model confirmation bias and potentially devastating unintended consequences; Optimize “**leading**” not “**lagging**” indicators



Exercise: Build an AI Utility Function to Recommend Where to Eat



What are the factors that might impact where you select to go eat?

- Affordability
- Convenience
- Type of food / Cuisine
- Ambiance
- Reservations
- Outdoor dining
- Food quality
- Food freshness
- Hygiene and Cleanliness
- Noise level
- Organic food
- Gluten-free food
- Locally-sourced food
- Menu
- Specialties
- Parking
- Valet parking
- Travel distance
- Noise level
- Restaurant lighting
- Restaurant spaciousness
- Yelp reviews
- Newspaper reviews
- Recommendations
- Uniqueness
- Previous experiences
- Employee wages
- Diversity policy
- Service quality
- Speed of service
- Value for money
- Price range
- Dietary Needs
- Promotions
- Location
- Things to do after
- Walking afterward
- Employee treatment
- Family-friendly
- Chef reputation
- Chain restaurant
- Seasonal Ingredients
- Community responsibility
- Food bank contributions
- Accessibility

Exercise: Build an AI Utility Function to Recommend Where to Eat

Intent: Quick, Cheap, Adequate Meal

- Affordability
- Convenience
- Type of food / Cuisine
- Ambiance
- Reservations
- Outdoor dining
- Food quality
- Food freshness
- Hygiene and Cleanliness
- Noise level
- Organic food
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- Food bank contributions
- Accessibility

Exercise: Build an AI Utility Function to Recommend Where to Eat

Intent: Fine Dining, Date Night Experience

- Affordability
- Convenience
- Type of food / Cuisine
- Ambiance
- Reservations
- Outdoor dining
- Food quality
- Food freshness
- Hygiene and Cleanliness
- Noise level
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- Community responsibility
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Exercise: Build an AI Utility Function to Recommend Where to Eat

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MODULE 2

Building YODA: Your Own Digital Assistant

*You cannot build a system that thinks well
without building one that questions well.*

GenAI Tool Challenges

GenAI tools regress their responses to the mean, which limits their creativity and the richness of their outputs.

Their outputs reflect the "average" or most common data trends rather than offering novel or outlier perspectives driven by:

- **Correlation, Not Causation**
Predicts next tokens from associations and correlations, not causation
- **Generic (Average) Responses:** GenAI produces safe, average outputs that are bland and lack expert-level depth of understanding.
- **Bias Towards Historical Patterns:** Reliance on past data reinforces existing biases, limiting forward-thinking ideas.
- **Struggle with Outliers:** Fails to handle rare or specialized scenarios, focusing instead on the most common data patterns.



Your Own Digital Assistant: Delivering More Relevant, Reliable Results

YODA structures context so AI can simulate more relevant, expert-quality reasoning

- ❑ **Step 1: Define and Upload Context & Intent**

Clarify problem, goals, constraints

- ❑ **Step 2. Upload Trusted Knowledge**

Blend credible research + internal expertise

- ❑ **Step 3. Uploads that Guide Reasoning**

Create Socratic + ethical + bias-aware narrative

- ❑ **Step 4. Explore and Upload Expert Perspectives**

Analyze across stakeholders and roles

- ❑ **Step 5. Synthesize, Stress-Test, & Build Simulations**

Recommend, then test with scenarios



YODA replaces broad statistical averaging with precision insight from relevant data

Farmer Crop Selection Scenario



Step 1: Define Intent & Context

Step 1 defines your role, objectives, and constraints to anchor the problem in a clear decision context, replacing vague questions with precision guidance tailored to your specific situation.

Role	Who Are You in This Context? Define your professional role, the decisions you own, your key responsibilities, and the audience you serve. Be specific — YODA calibrates everything it does to the person you describe here.
Goals	What Does Success Look Like? State your primary goal and objectives, your key success metrics, and the time horizon that matters. This tells YODA which outcomes to optimize toward — and what trade-offs to surface when they arise.
Constraints	What Are Your Boundaries & Constraints? Define your constraints — budget, time, political realities, ethical lines, and what is out of scope. A YODA without constraints will optimize for the goal without regard for the boundaries you must operate within.

Step 1 Activation Prompt

Paste this to open every YODA session:
“I am a [role] at [organization]. My primary goal is [X] within [timeframe]. I make decisions about [Y]. My key stakeholders are [Z]. My constraints are [A, B, C]. My audience is [non-technical / technical / mixed]. Calibrate all your responses to this context.”

Crop Selection Step #1 – Upload Initiative Intent and Context

Crop Selection Effectiveness Objectives

Prompt: *We want to help small family farmers optimize crop selection. Farmers encounter various challenges when determining which crops to plant for the upcoming growing season. This requires careful planning to balance short-term financial objectives with long-term resilience, including:*

- ***Profit Maximization:*** *Selecting suitable crops can help farmers achieve the highest possible returns, optimizing income amid volatile markets and input costs.*
- ***Risk Management:*** *Diversifying crops can mitigate financial risk by reducing dependency on a single market and providing a buffer against climate variability and pests.*
- ***Resource Efficiency:*** *Crop choices impact the use of land, water, labor, and equipment, so efficiently allocating these resources is essential for reducing costs and maximizing productivity.*
- ***Long-Term Soil Health:*** *Rotating crops and incorporating sustainable practices can enhance soil quality, prevent erosion, and maintain fertility, ensuring the land's viability for future seasons.*
- ***Community Impact:*** *Crop selection influences local economies by supporting local supply chains, creating jobs, and contributing to food security.*
- ***Environmental Stewardship:*** *Responsible crop choices, including cover crops and rotations, support biodiversity, reduce greenhouse gas emissions, and promote ecological balance, aligning farming practices with environmental sustainability goals.*



Step 2: Upload Trusted Knowledge

Step 2 provides relevant research, frameworks, and institutional knowledge to replace broad statistical averaging with precision averaging across the sources you trust most.

Research

Trusted External Sources (Research)

Load the research, frameworks, and methodologies that define how you think. These become the evidence base YODA cites when it recommends — not anonymous internet consensus, but your curated, credible sources.

TLADS

Organizational Domain Knowledge (TLADS)

Load the institutional context that never appears in published research: your organization's history, past decisions, lessons learned, internal terminology, and the unwritten rules of how things actually get done.

Step 2 Activation Prompt

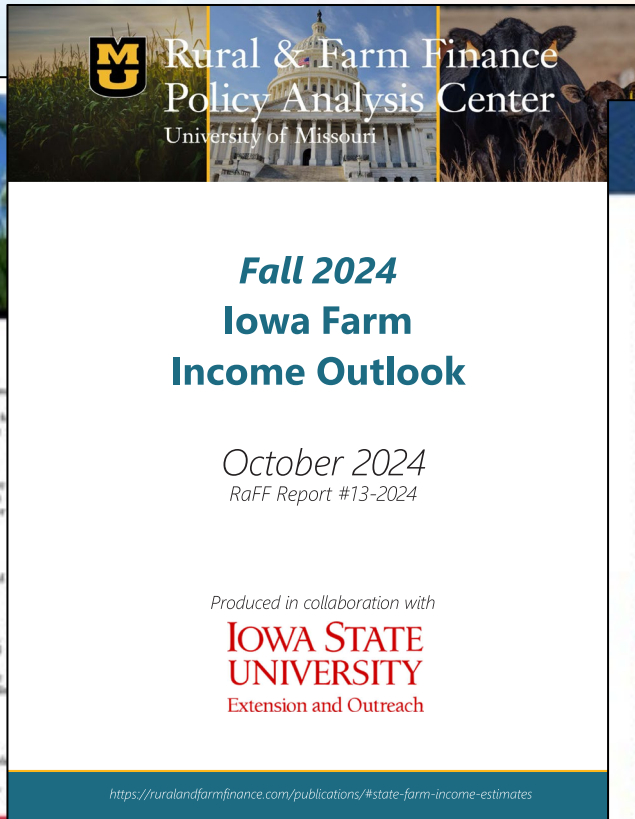
After establishing context in Step 1, add:

"The following sources and frameworks are the knowledge base I want you to reason from. Treat these as your primary evidence. When you recommend, cite which of these supports your recommendation. Flag anything where you are drawing on general training rather than these sources."

Then paste your curated sources, frameworks, or excerpts.

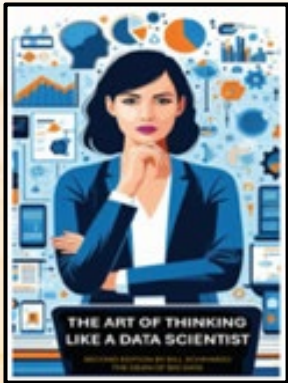
Crop Selection Step 2A: Upload Peer-reviewed Research

Step 2A provides peer-reviewed research and validated data sources to ground your analysis in evidence-based insights, replacing assumptions with precision decisions rooted in credible agricultural science and economic data.



Crop Selection Step 2B: Upload Organizational Domain Knowledge

Step 2B provides organizational knowledge using the Thinking Like a Data Scientist (TLADS) methodology to capture goals, constraints, and decision context, replacing generic assumptions with precision insights grounded in how your farm actually operates.



Step 1: Assess Business Initiative

Business Initiative: Improve Crop Selection Effectiveness

KPIs: Yield per acre, profit per acre, input cost efficiency, soil health indicators, market price realization, risk exposure index, environmental investment, resource use efficiency, biodiversity index, climate impact score, and harvest timing accuracy. Additional metrics to consider include energy consumption per acre, pesticide application rate, fertilizer use efficiency, crop disease incidence rate, labor hours per acre, crop rotation frequency, soil organic matter percentage, local employment generated, produce sold locally, greenhouse gas emissions

- Desired Outcomes:
- Maximize Crop Yield and Profitability
 - Enhance Soil Health and Sustainability
 - Reduce Risk and Volatility
 - Improve Resource Efficiency

- Maximize Crop Resilience
 - Optimize Timing of Planting and Harvest
 - Support Regional Food Security
 - Reduce Environmental Impact

- Increase Operational Efficiency
 - Enhance Crop Quality
 - Strengthen Market Position
 - Boost Climate Resilience

- Benefits

 - Increased Profitability: Align crop choices with market and production costs to enhance profitability.
 - Long-Term Farm Viability: Promote soil health and sustainability.
 - Reduced Input Costs: Lower water, fertilizers, and pest control expenses.
 - Resilience to Shocks: Buffer against price and environmental variability.
 - Higher Yield Consistency: Reduce yield volatility year-over-year.
 - Improved Access to Grants: Access funds for sustainable practices.
 - Market Diversification: Flexible crop choices for multiple markets.
 - Better Adaptability to Climate Change: Adjust to changing climate patterns.
- Potential Impediments

 - High Initial Costs: Upfront investments (e.g., irrigation, equipment) may delay immediate financial returns.
 - Regulatory Uncertainty: Changes in policies or standards can impact operations.
 - Labor and Equipment Constraints: Need for specialized skills or machinery.
 - Market Access Constraints: Difficulty reaching target markets or securing fair prices.
 - Soil or Water Constraints: Limited by specific regional conditions.
 - Climate Change Variability: Unpredictable weather patterns can disrupt plans.
 - Technological Barriers: Limited access to data or expertise for optimization.

- Failure Ramifications

 - Financial Losses: Poor choices reduce yields and increase costs.
 - Soil Degradation: Poor rotation or nutrient practices degrade soil health.
 - Increased Debt Burden: Financial strain from ineffective crop planning.
 - Reduced Market Competitiveness: Reputation affected by suboptimal crop outcomes.
- Unintended Consequences

 - Over-Reliance on Certain Crops: Lack of biodiversity increases risk.
 - Ecosystem Impact: Monocropping or high inputs harm local flora/fauna.
 - Market Saturation: Oversupply if too many adopt similar strategies.
 - Impact of Weather Extremes: Historic weather patterns may no longer apply.

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Steps 2: Understand Stakeholders and Expectations

Business Initiative: Improve Crop Selection Effectiveness

Stakeholder	Importance to Stakeholder	Desired Outcomes	Key Decisions	KPIs & Metrics
Farmer (Primary)	Ensures profitability and sustainability of the farm	Maximize yield and minimize costs, improve soil health, diversify income streams	Crop selection, resource allocation, crop rotation strategies	Yield per acre, profit per acre, soil organic matter, crop rotation frequency
Local Community	Economic and food security impacts	Economic growth, food security, job creation, community health	Community engagement, local partnerships, promoting sustainable practices	Employment generated, % local produce sold, community engagement hours, local food security index
Environmental Groups	Reducing environmental impact of farming	Soil health, water quality, biodiversity protection, carbon sequestration	Fertilizer and pesticide usage, crop rotation, conservation practices	Water quality index, soil erosion rate, biodiversity support measures, greenhouse gas emissions reduction
Supply Chain Partners	Stable and quality product supply	Reliable, high-quality supply, consistency in crop volume and quality, alignment with sustainability goals	Crop quality standards, delivery schedules, adherence to sustainability standards	Delivery timeliness, quality control metrics, sustainability certification adherence, consistency in crop yield
Government Regulators	Compliance with environmental and economic policies	Reduced emissions, sustainable practices, rural economic stability	Crop selection to meet policy requirements, participation in conservation programs	Carbon footprint, regulatory compliance rate, participation in incentive programs, environmental compliance score
Investors / Financiers	Financial returns on investments	High ROI, risk mitigation, long-term farm viability	Crop profitability analysis, resource allocation, risk management strategies	Return on investment (ROI), risk exposure index, financial health score, crop yield consistency

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Step 3: Establish Intelligence Narrative

Step 3 gives YODA the reasoning disciplines that guide how it thinks, challenges assumptions, and safeguards decision quality.

Pillar 1 Upload Socratic Method

Instructs YODA to challenge your assumptions rather than confirm them. Organizes inquiry across seven question types: clarification, probing assumptions, probing evidence, examining viewpoints, implications, questioning the question itself, and validating sources.

Pillar 2 Upload Ethical Foundation (Bible, Koran)

Loads YODA with your values framework so it reasons responsibly by default — not just efficiently. Without this pillar, YODA optimizes for plausibility, not ethics. With it, every recommendation is tested against principles of fairness, dignity, and long-term societal impact.

Pillar 3 Upload Cognitive Bias Mitigation

Trains YODA to recognize and name cognitive biases — confirmation bias, anchoring, groupthink — before they distort your reasoning. YODA surfaces the bias pattern, explains why it matters in your specific context, and offers reframing prompts to correct course.

Pillar 4 Upload Sustainability Framework

Leverages UN Sustainability efforts to ensure YODA's guidance accounts for long-term consequences and systemic impact — not just immediate wins. Anchors every recommendation in second and third-order effects, resource sustainability, and the question: does this create value that compounds over time, or value that extracts?

Step 4: Explore and Upload Expert Stakeholder Perspectives

Step 4 gives YODA the ability to simulate how your key stakeholders will receive, interpret, and respond to your recommendations before you commit to them.

Who	Define Your Expert Stakeholders Identify the people who most impact your decision. For each, describe their role, their primary goals, what keeps them up at night, and what credentials and insights they bring to the question.
What	Map Interests and Conflicts For each expert stakeholder, define what they value and where their interests align with — or conflict with — yours. Making conflicts explicit before a decision is made is far less costly than discovering them after.
How	Simulate Stakeholder (Expert) Responses Once personas are loaded, YODA can stress-test your recommendations by reasoning through how each expert will respond. This surfaces objections, blind spots, and equity gaps you would otherwise miss.

Step 4 Activation Prompt

Define each persona with this structure:

“[Name/Role]: Their primary goal is [X]. They are most concerned about [Y]. They will support this initiative if [A] and resist it if [B]. They prefer to receive information as [format]. Their influence level is [high/medium/low].”

Then invoke with:

“Analyze this decision from the perspective of each stakeholder persona I have defined. Surface conflicts, flag equity gaps, and recommend adjustments that better align with our success metrics.”

Our Crop Selection example Could invoke an expert group of agronomist, soil specialists, irrigation specialists, environmental compliance officers, and crop specialists

Step 5: Synthesize, Recommend, Validate & Explore

Step 5 builds on earlier work to deliver a structured recommendation with explicit rationale, credible sources, stated assumptions, and what-if pathways to test before committing.



What a Step 5 Output Contains

- ✓ **The Recommendation**
A clear, specific answer — not a list of options with no guidance
- ✓ **The Rationale**
Why this recommendation, grounded in uploaded sources and domain knowledge
- ✓ **Key Assumptions**
What must be true for this recommendation to hold — made explicit, not buried
- ✓ **Credible Sources**
Which research, data, or expert input drives the conclusion
- ✓ **What-If Pathways**
3 scenarios to stress-test: policy change, market shock, environmental shift



The Learn-Adapt Loop

- 1 Recommend**
YODA delivers structured output with rationale and sourcing
- 2 Test**
Stress-test against scenarios — what breaks this recommendation?
- 3 Learn**
Surface assumptions that failed. Update context and knowledge base
- 4 Refine**
Revise the recommendation. Load new evidence. Adjust governance
- Repeat**
Each cycle compounds YODA's precision and your judgment together

Crop Selection Recommendation: Base Case

Prompt: Based on the research, what is your recommended crop mix for your 10,000-acre farm in Northeast Iowa for Spring 2026, considering profitability, soil health, market trends, policy impacts, and environmental sustainability? Show in table format. Include your rationale.

Crop	Acres	Rationale
Corn	500	Corn remains a profitable crop, particularly with increased ethanol demand due to policy changes supporting year-round higher ethanol blends in Iowa and other Midwest states. Corn’s deep root structure also benefits soil health and nutrient retention in the rotation.
Soybeans	300	Soybeans offer a good rotational balance with corn, replenishing soil nitrogen and helping control pest and disease cycles. They are also less input-intensive compared to corn, providing a cost-effective option given fluctuating fertilizer prices. Soybeans continue to have strong demand for both food products and biofuel production.
Cover Crops (rye, clover)	100	While not directly profitable, cover crops improve soil structure, reduce erosion, and enhance water retention, benefiting long-term productivity. Cover crops also align with USDA programs that offer incentives for environmental conservation, potentially offsetting costs.
Alfalfa or Oats	100	Adding a forage crop like alfalfa or oats provides soil health benefits by diversifying the rotation and reducing pest pressure. Alfalfa, in particular, supports nitrogen-fixation, lowering future fertilizer needs. These crops can also serve local livestock markets or be sold as forage.

Base Strategy

Balance profit and soil health

Maintain a strong corn–soy core while allocating acres to soil-building practices.

Improve input efficiency

Use rotation and soybeans to reduce fertilizer costs and stabilize margins.

Build resilience through diversification

Add cover and forage crops to enhance soil, reduce risk, and increase flexibility.

Crop Selection Scenario Exploration #1: Tariffs

Prompt: *What is the potential impact of 50% Tariffs on US Agricultural Trade with Mexico & Canada? Start with an overview of the effects of tariffs on my “Optimizing Crop Selection Effectiveness” initiative, then provide a strategy to counteract the tariffs in bullet point format. Finally, produce a new crop selection recommendation, and provide justification for your recommendations (in table format).*

If the US enacts 50% tariffs on all agricultural imports from Mexico and Canada, and those countries retaliate with equivalent tariffs on US agricultural exports, this would significantly impact crop selection decisions for a 1,000-acre farm in Northeast Iowa.

- **Corn and soybeans** are heavily export-dependent, and increased tariffs on them could reduce demand from their major trade partners.
- **Price volatility** could lead to lower domestic prices as supply builds up in the US market due to reduced exports.
- **Alternative crops** that are less dependent on international trade could become more viable, while government subsidies and policy adjustments may also help mitigate risks.

Crop	Acres	Rationale
Corn	400	Reduced due to potential lower export demand from Canada and Mexico, leading to domestic price declines. Lowering corn acreage mitigates financial risk.
Soybeans	250	Soybean exports could suffer due to tariffs, necessitating a reduction to hedge against market uncertainty. Some acres may shift to crops with local or domestic demand.
Cover Crops (rye, clover)	150	Increased to improve soil health while waiting for more stable market conditions. Cover crops reduce reliance on fertilizer inputs.
Alfalfa or Oats	200	Increased to support livestock markets and local forage demand. Alfalfa is in high demand for domestic feed, offering price stability.

Tariff Strategy

Reduce reliance on international markets

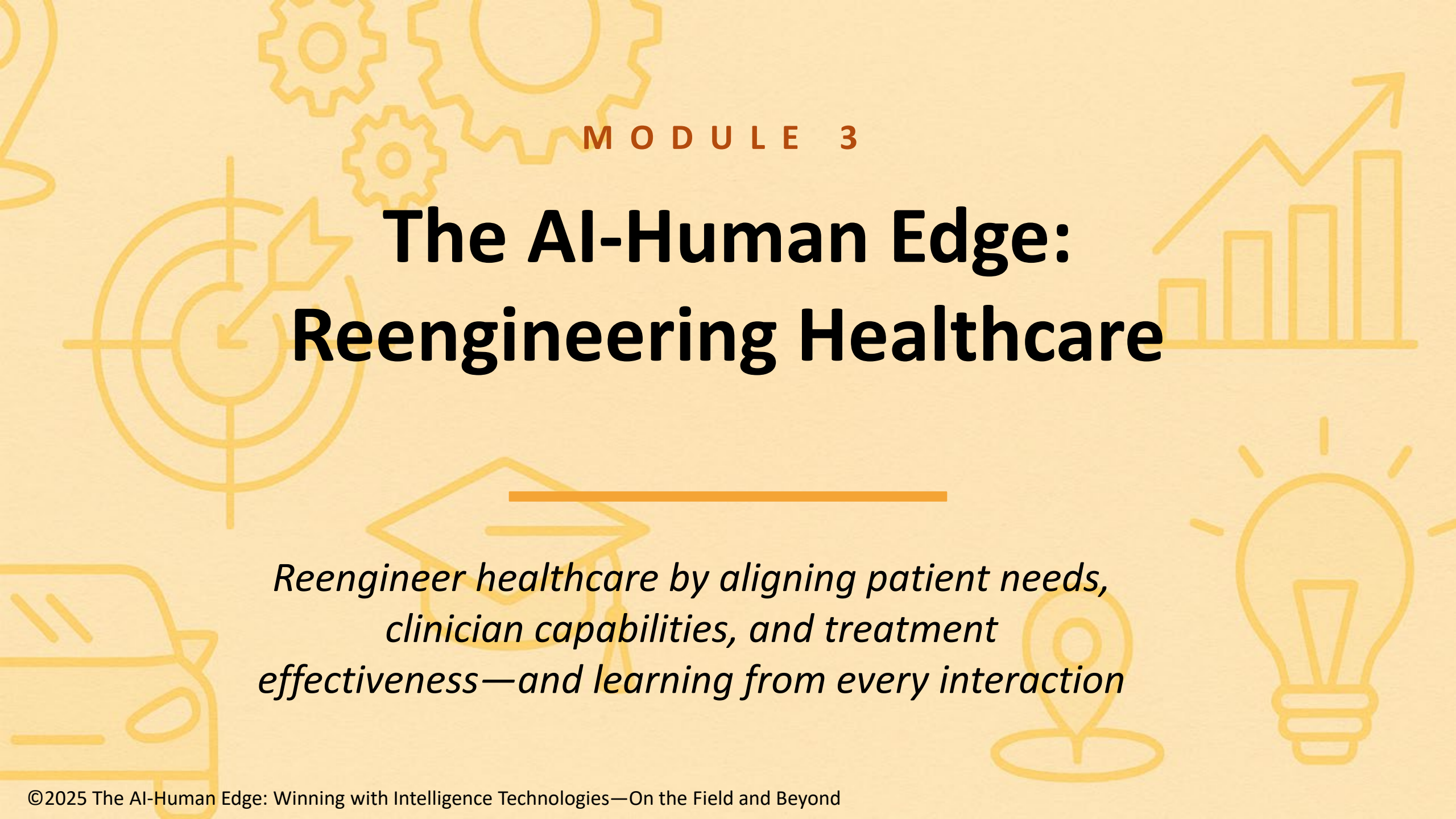
Shift acres to crops with strong domestic demand to insulate from export disruptions.

Diversify risk

Add more cover crops to offset potential revenue loss and reduce fertilizer input costs.

Support local livestock markets

Increase alfalfa or oats, which face fewer trade barriers and serve domestic feed demand.



MODULE 3

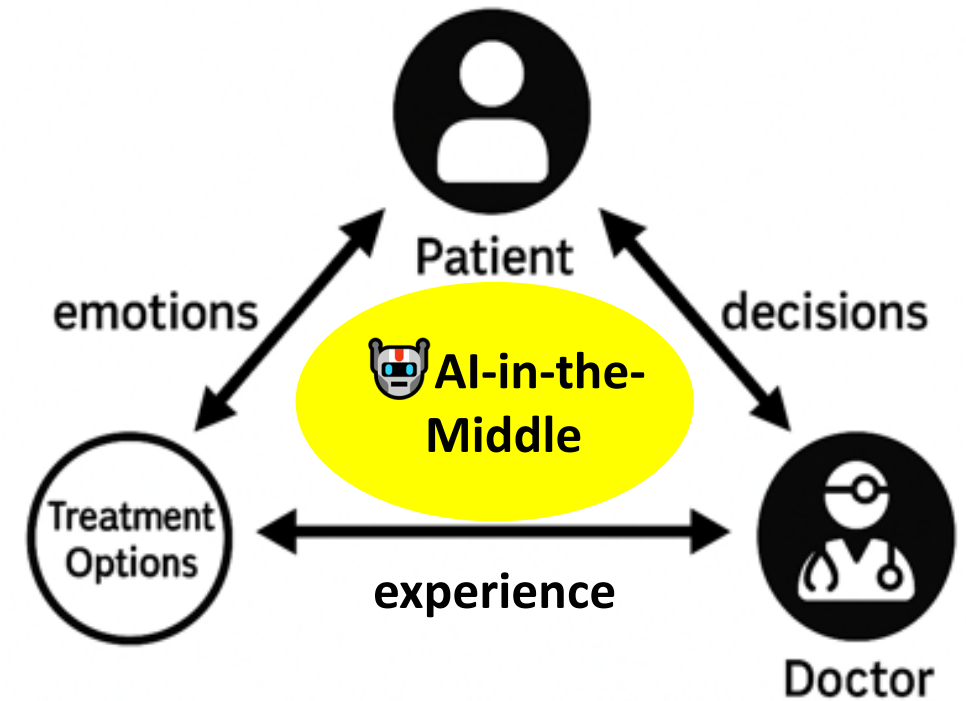
The AI-Human Edge: Reengineering Healthcare

Reengineer healthcare by aligning patient needs, clinician capabilities, and treatment effectiveness—and learning from every interaction

Reengineering Healthcare with AI-in-the-Middle

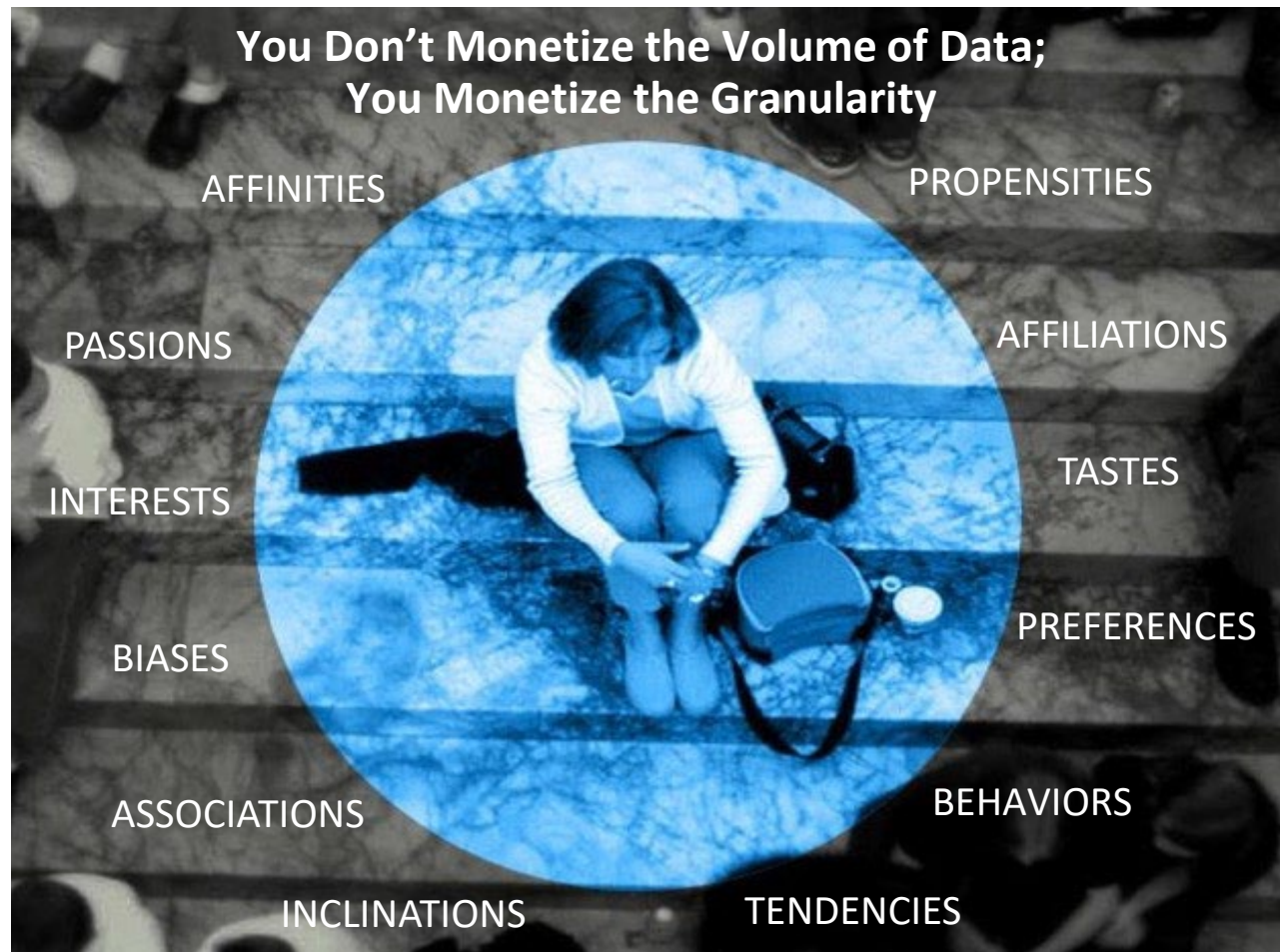
Leading healthcare organizations will reengineer patient–doctor relationships by leveraging Patient, Doctor, and Treatment EPMs to continuously improve decisions and outcomes

- **Context-Aware Precision Care**
Deliver the right intervention at the right moment
- **Continuous Behavioral & Clinical Modeling**
Move beyond static records to dynamic, real-time patient understanding
- **Early Risk & Intervention Signals**
Detect progression and act sooner
- **Dynamic Learning System**
Models improve with every patient interaction
- **Compounding Outcomes & Value**
Better survival, quality of life, efficiency, and cost



Entity Propensity Models + Nanoeconomics: Deliver Better Outcomes

Nanoeconomics is the economics of individual entities' predicted behavioral and performance propensities that drive outcomes.



Entity Propensity Models (EPMs) operationalize nanoeconomics by modeling individual behavioral and performance propensities to anticipate outcomes and guide decisions.

- Model behaviors at the entity level—not averages.
- Turn behaviors, preferences, and biases into more relevant and actionable predictions.
- Predict actions such as buying, learning, or adopting.
- Improve decision timing, messaging, and interventions.
- Learn and adapt to continuously refine propensities with new data.

Patient Entity Propensity Model

A Patient EPM measures (quantifies) the patient’s behavioral, clinical, and engagement patterns and tracks their progression toward desired health outcomes.

Patient EPM	
Propensity Score	Value
Treatment Adherence	79
Risk Progression	82
Behavioral Response	75
Core Engagement	84
Comorbidity Complexity	77
Mental & Emotional Resilience	81
Social Support Stability	73
Adverse Event Vulnerability	74

- **Personalize care decisions**
Leverage Patient EPMs to understand adherence, risk progression, and behavioral response patterns.
- **Match clinician strengths to patient needs**
Use Doctor EPMs to align diagnostic expertise, experience, and treatment tendencies to the situation.
- **Optimize treatment selection in context**
Incorporate Treatment EPMs to balance effectiveness, side-effect risk, and patient fit.
- **Orchestrate real-time decision guidance**
The ELM synthesizes all three EPMs to recommend the best course of action for this moment.
- **Continuously learn from outcomes**
Feedback loops refine patient, doctor, and treatment models to improve future decisions.

Doctor Entity Propensity Model

A Doctor EPM measures (quantifies) the clinician’s diagnostic, decision-making, and treatment execution propensities and tracks their impact on patient outcomes.

Doctor EPM	
Propensity Score	Value
Diagnostic Accuracy	88
Condition Familiarity	90
Treatment Technique	81
Decision Confidence	76
Consultation Thoroughness	85
Adaptability to Complexity	73
Communication Effectiveness	84
Responsiveness / Availability	77

- **Align clinician strengths to patient needs**
Match physician expertise and experience to patient complexity and condition requirements.
- **Understand treatment execution tendencies**
Capture treatment preferences, technique proficiency, and adherence to best practices.
- **Improve communication and patient trust**
Surface propensities around communication effectiveness and patient engagement.
- **Adapt to clinical complexity in real time**
Assess how clinicians respond to uncertainty, comorbidities, and evolving patient conditions.
- **Continuously improve through feedback loops**
Learn from outcomes to refine clinician decision patterns and improve future care.

Cancer Treatment Entity Propensity Model

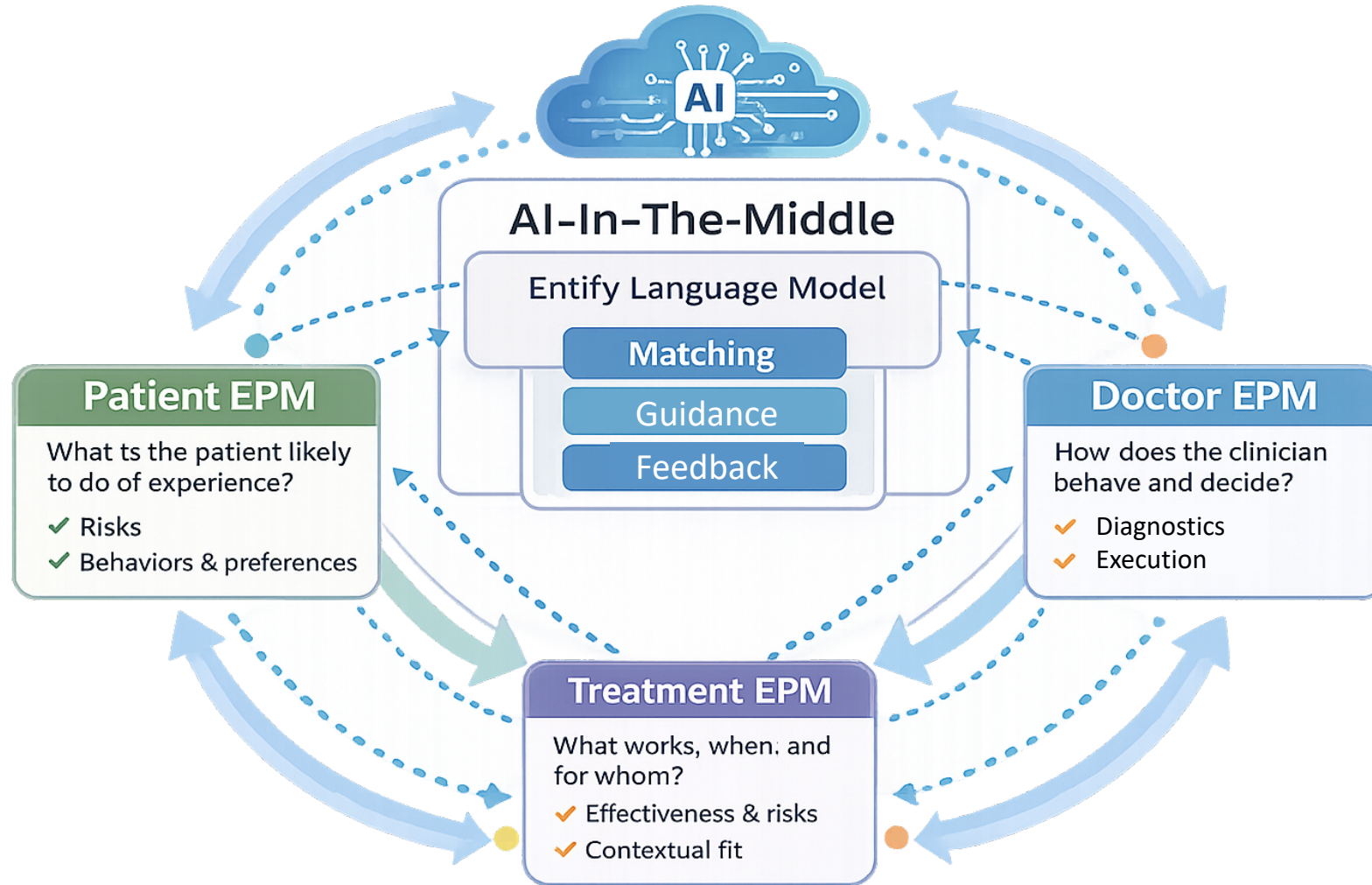
A Cancer Treatment EPM measures (quantifies) the effectiveness, risk, and contextual fit of treatment options and tracks their impact on patient outcomes across different conditions.

Cancer Treatment EPM	
Propensity Score	Value
General Efficacy	84
Side Effect Risk	70
Patient Adherence to Treatment	79
Speed of Onset	75
Treatment Novelty	82
Interaction with Comorbidities	78
Suitability for Patient Context	81
Long-Term Effectiveness	76

- **Quantify treatment effectiveness in context**
Measure how well treatments perform across different patient profiles and clinical conditions.
- **Assess risk and side-effect tradeoffs**
Evaluate adverse event likelihood and tolerance based on patient-specific factors.
- **Match treatments to patient and clinician context**
Align treatment options with patient characteristics and clinician expertise.
- **Optimize timing and intervention strategy**
Identify when treatments are most effective across the patient journey.
- **Continuously learn from real-world outcomes**
Use feedback loops to refine treatment effectiveness and improve future recommendations.

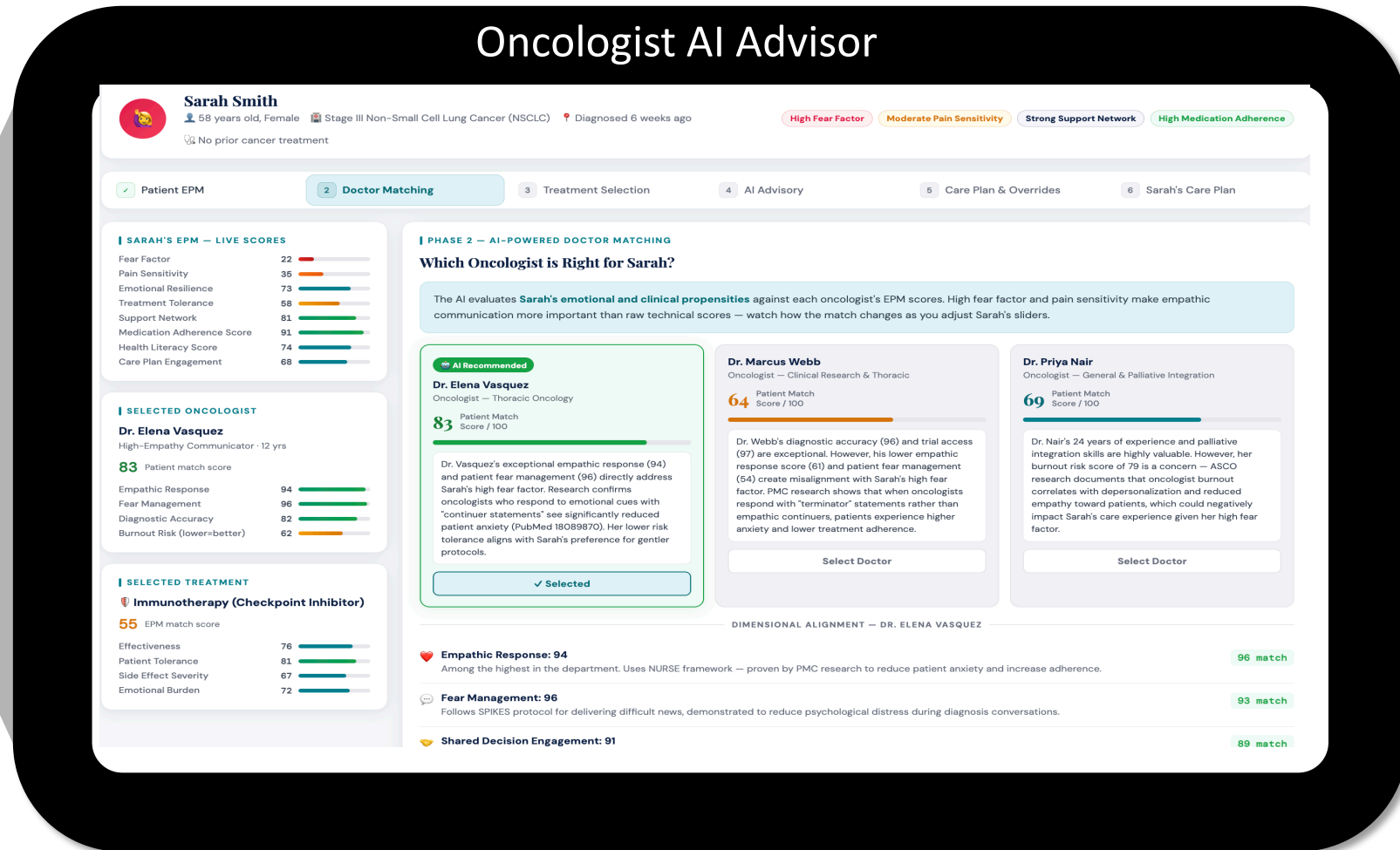
Reengineering Healthcare with AI-in-the-Middle

Dynamically align patient needs, clinician capabilities, and treatment effectiveness to optimize care decisions in real time.



AI-in-the-Middle: Making Human Care More Human

A liver-cancer patient must choose between aggressive and gentler treatments. The ELM interprets risk, side effects, empathy, and emotional readiness to guide the doctor's recommendation in clear, trusted language.



Bill Schmarzo – The Dean of Big Data

- ❖ Author, Professor, Innovator, Corporate Advisor – Data Science & Data Economics
- ❖ Iowa State University, Faculty
- ❖ Coe College, AI Research Fellow
- ❖ University San Francisco School of Management, Executive Fellow
- ❖ National University of Ireland-Galway, Honorary Professor

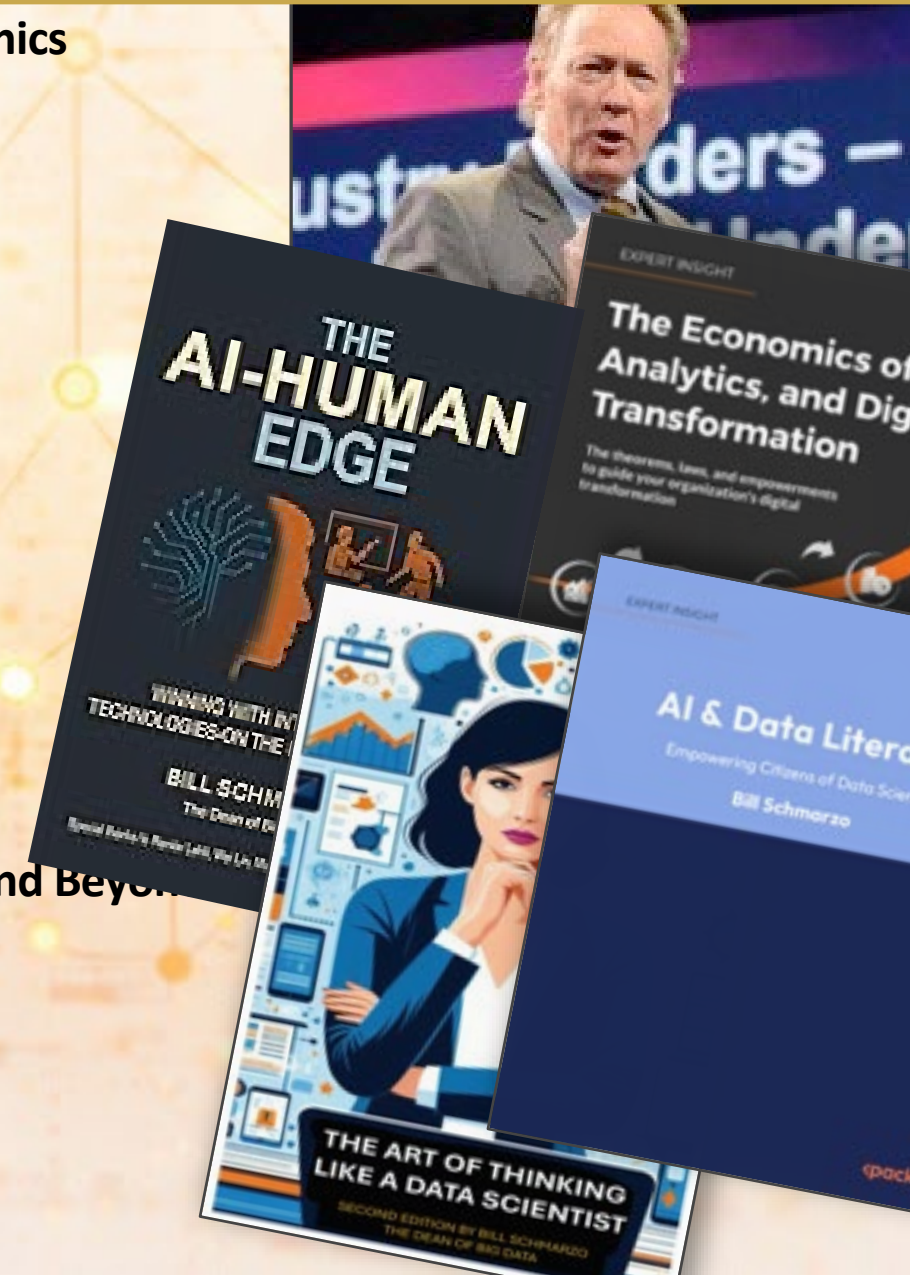
Books

- ❖ “Big Data: Understanding How Data Powers Big Business”
- ❖ “Big Data MBA: Driving Business Strategies with Data Science”
- ❖ “The Art of Thinking Like a Data Scientist”
- ❖ “The Economics of Data, Analytics, and Digital Transformation”
- ❖ “AI & Data Literacy: Empowering Citizens of Data Science”
- ❖ “The AI-Human Edge: Winning with Intelligence Technologies—On the Field and Beyond”

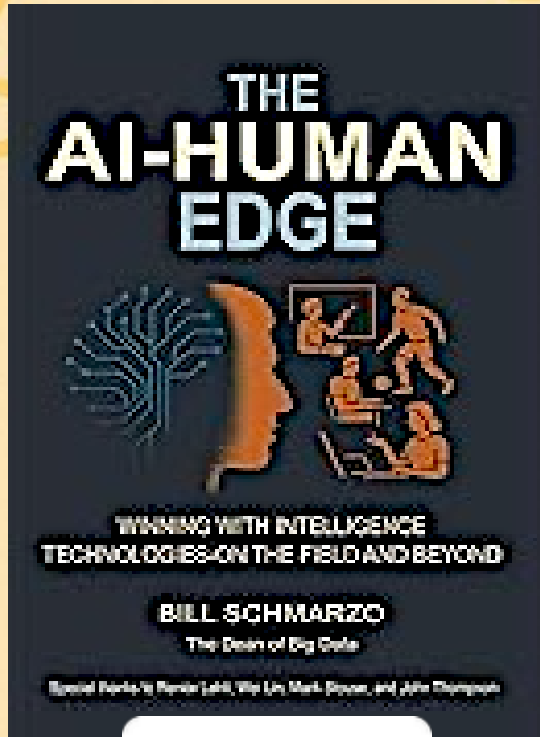
Contact me!

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Bill Schmarzo – The Dean of Big Data Books



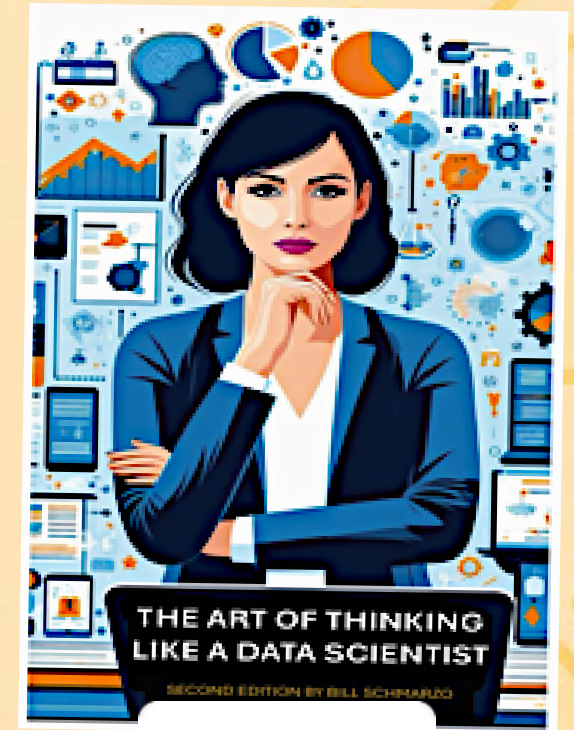
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