

AI with Guardrails: A Project Model That Improves Learning Without Lowering Standards

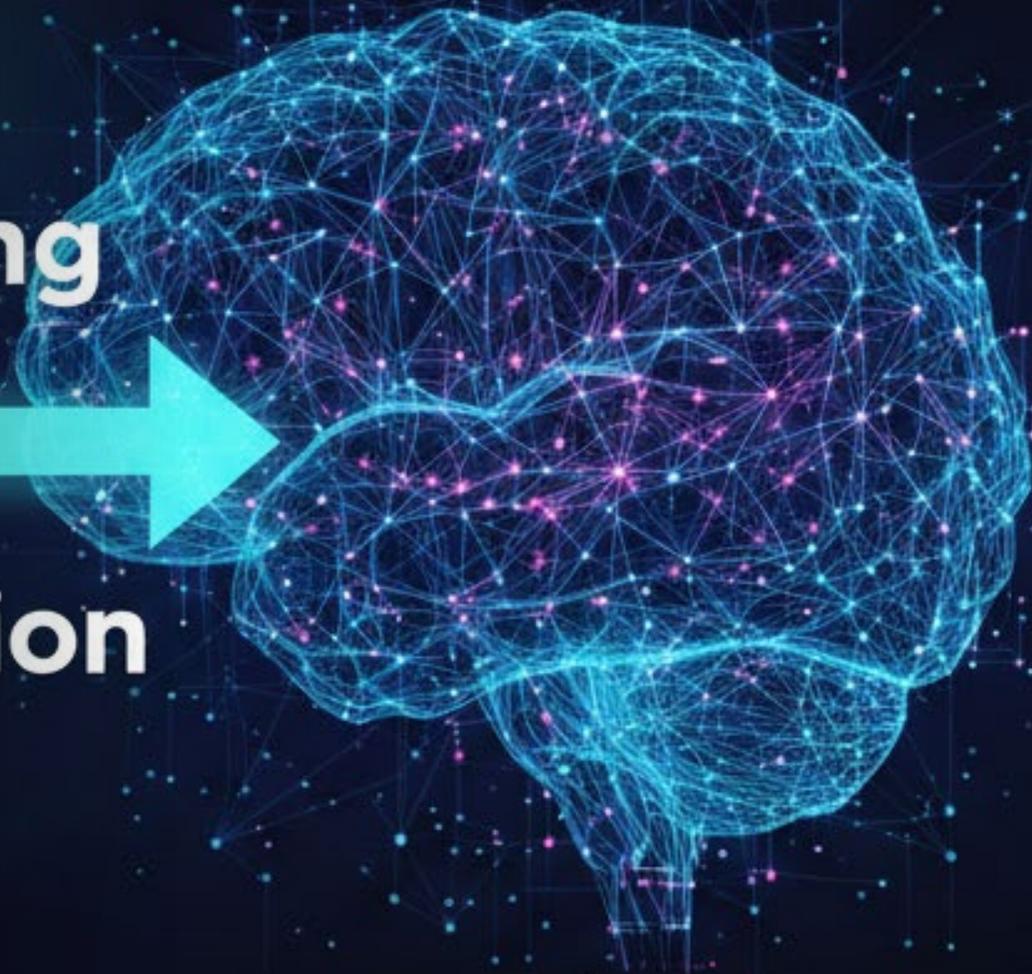
Moving beyond the binary of banning or ignoring generative AI in higher education.



Coaching



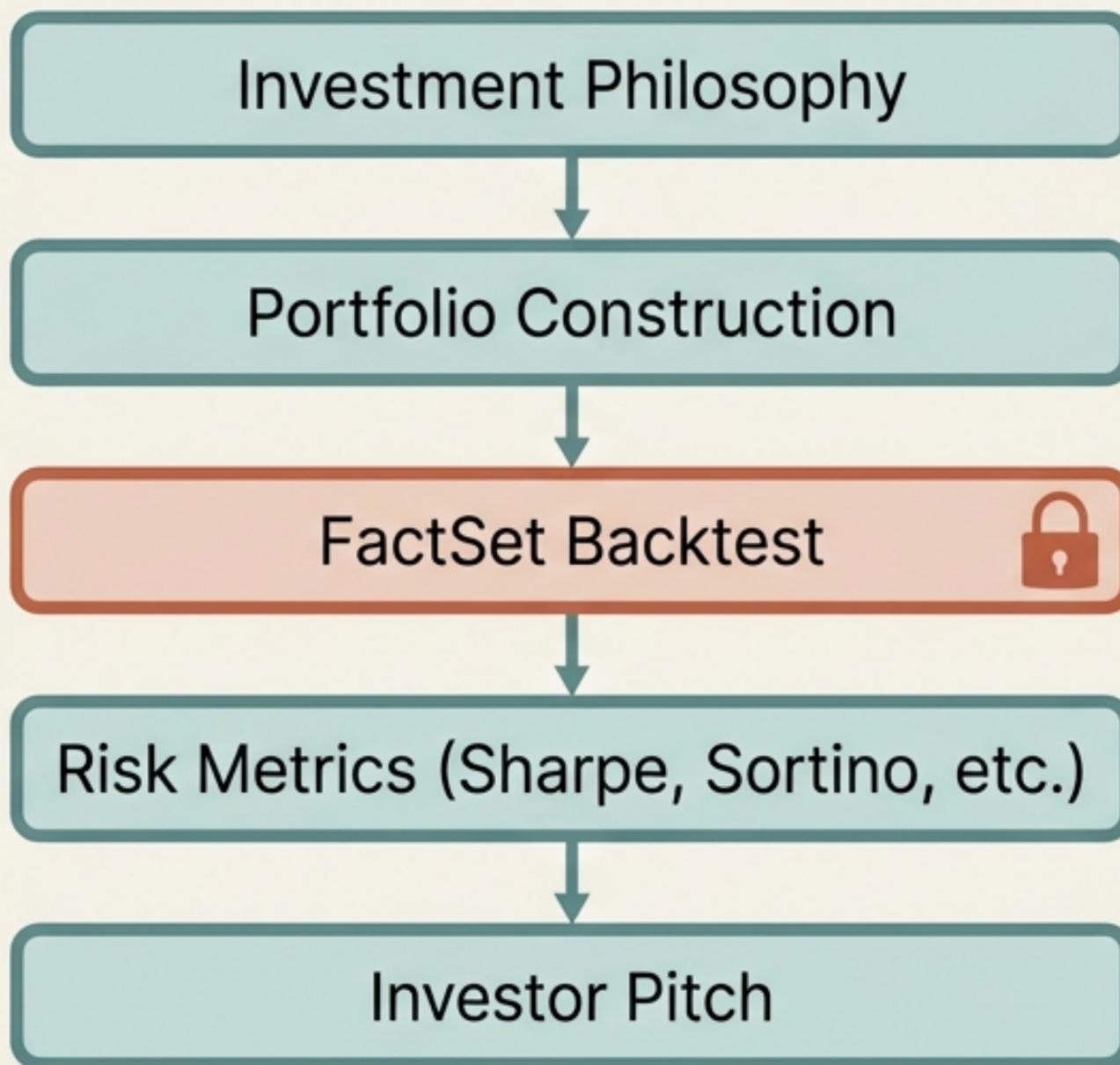
Verification



BAN AI	IGNORE AI	STRUCTURE AI
Hidden use	Shallow learning	Supervised learning
Fear-based	Controlled by no one	Designed
Unrealistic	Chaotic	Pedagogical

Insight: Neither prohibition nor passivity works.
We must design around the existence of AI.

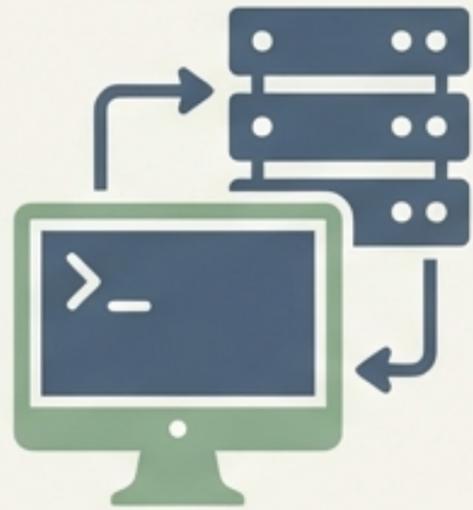
The Case Study: The Hedge Fund Project



Constraint: All backtests required in FactSet. AI cannot access this.

Context: A complex, multi-modal finance project where AI is allowed, but thinking is graded.

The Guardrails: Designing Constraints



Institutional Software

Students must drive the FactSet terminal. AI cannot run this platform.



Multi-Modal Output

Deliverables: Excel Model + Pitch Deck + Written Summary + Podcast.



The Golden Rule

Understand Every Step. The student acts as the Auditor.

What AI Tools Did Students Use?

ChatGPT (OpenAI)

Grammarly

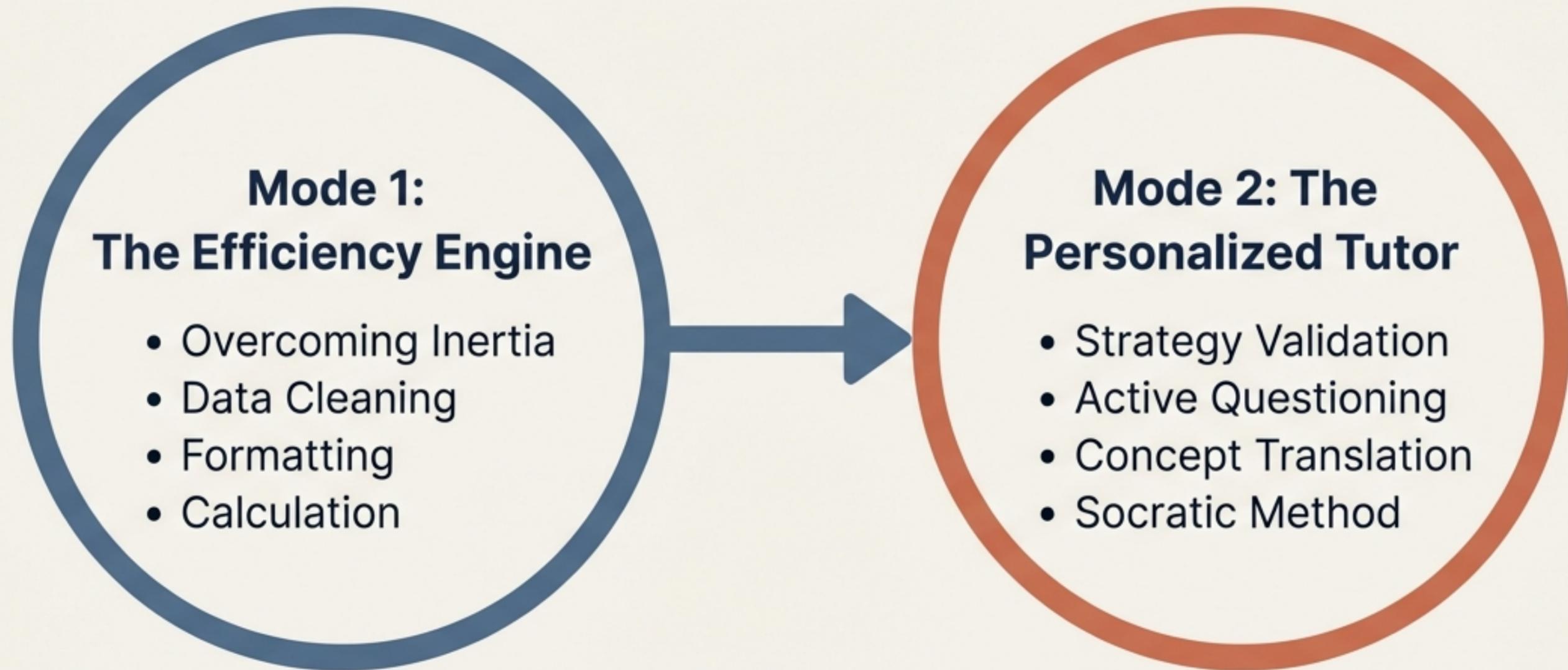
Copilot

NotebookLM

Perplexity

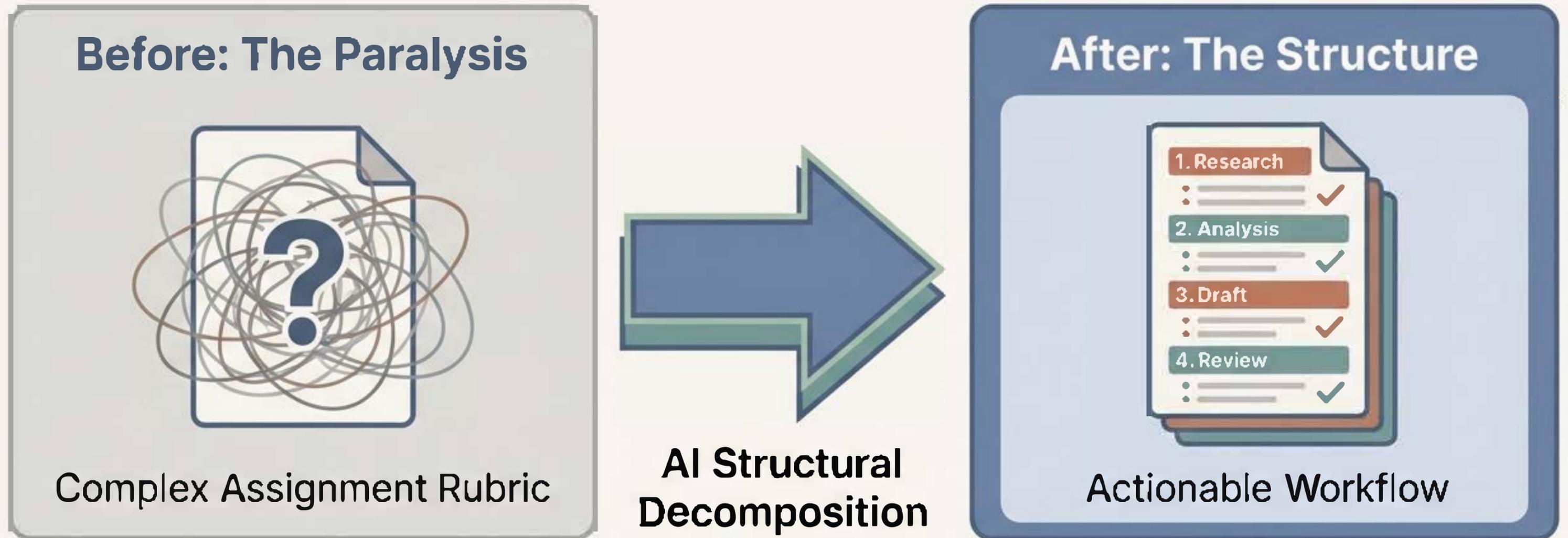
Claude

The Student-AI Partnership Model



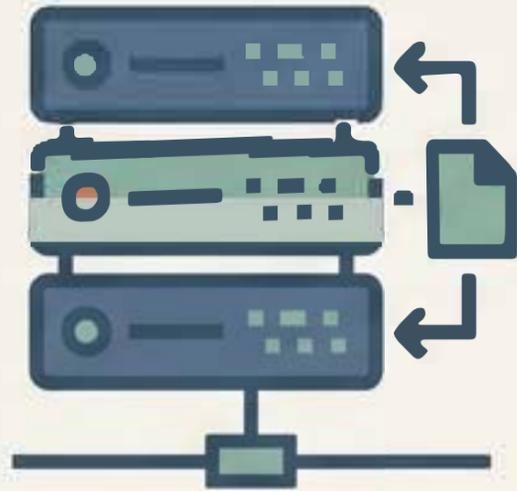
Students identify AI not as a replacement for intelligence, but as a multiplier for efficiency and a scaffold for complex financial concepts.

Mode 1: Overcoming Inertia (The Cold Start)



Student Evidence: Jessica utilized AI to break down the assignment rubric, creating organized steps when she was initially struggling to start.

Mode 1: Bridging the Technical Gap



FactSet Export
(Raw Data)



AI Guided
Cleaning

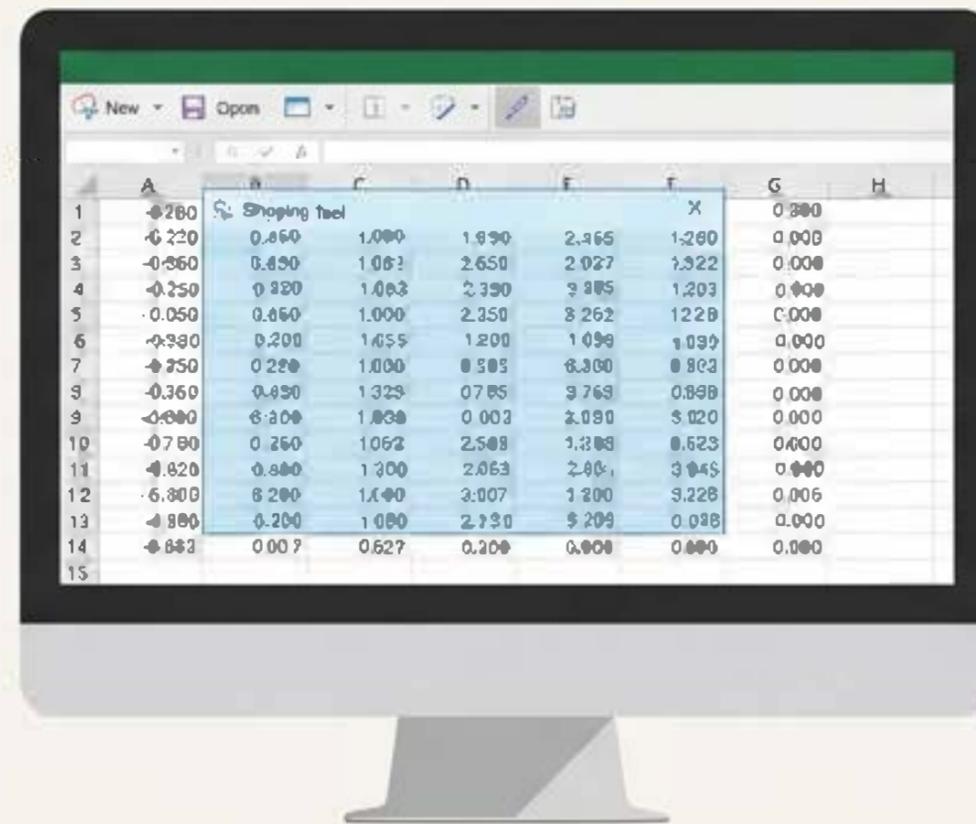


Final Excel
Output

Student Evidence: Enrique used AI to automate the manual labor of data preparation, liberating time for actual financial analysis.

Mode 1: The Quantitative Assistant

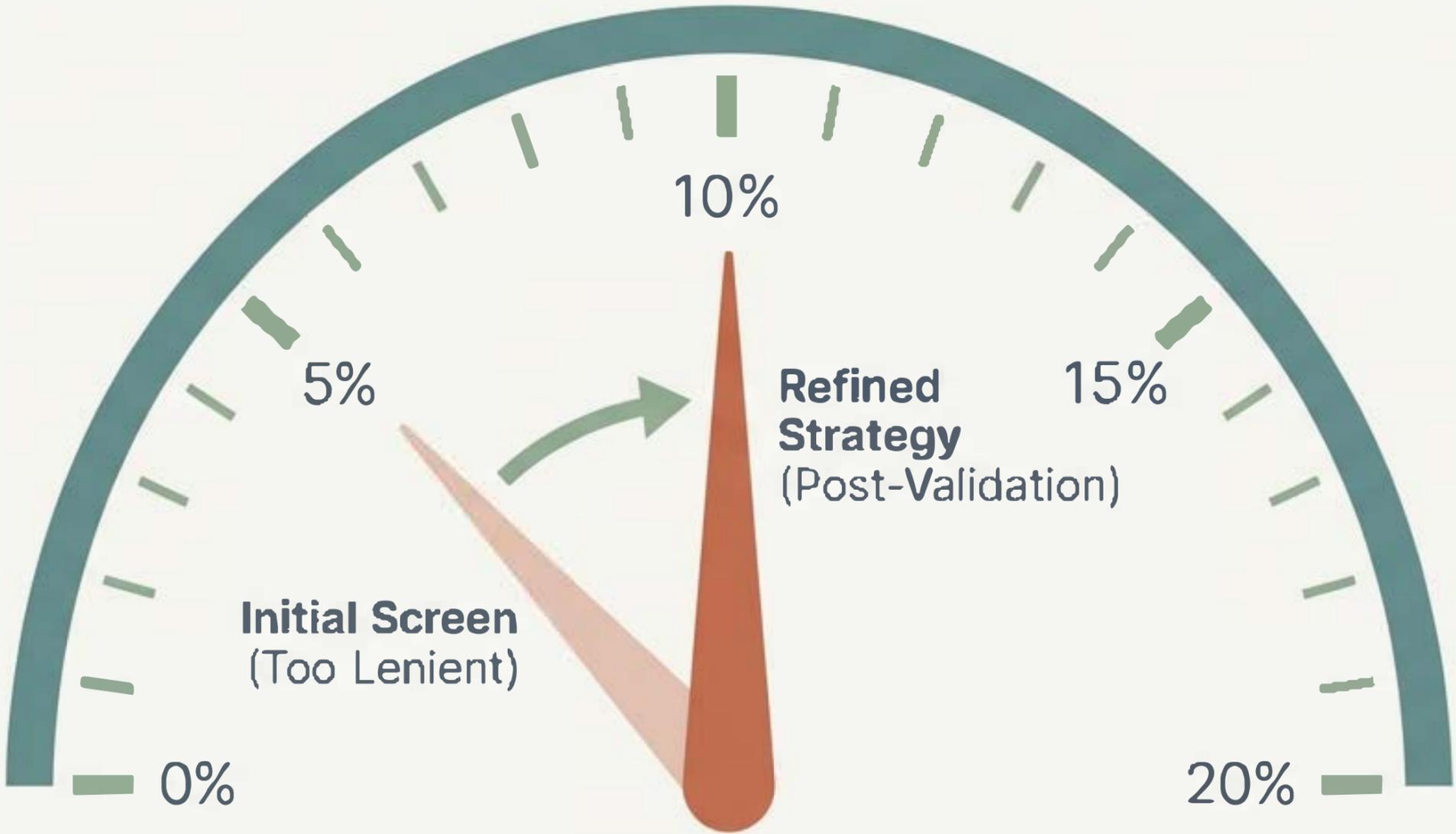
- ✓ Sharpe Ratio
- ✓ Treynor Ratio
- ✓ Sortino Ratio
- ✓ Jensen's Alpha



System: Analyzing screenshot error...
Formula correction suggested.

 **Student Evidence:** Delfino used screenshot uploads to debug  "stuck" calculations in Excel.

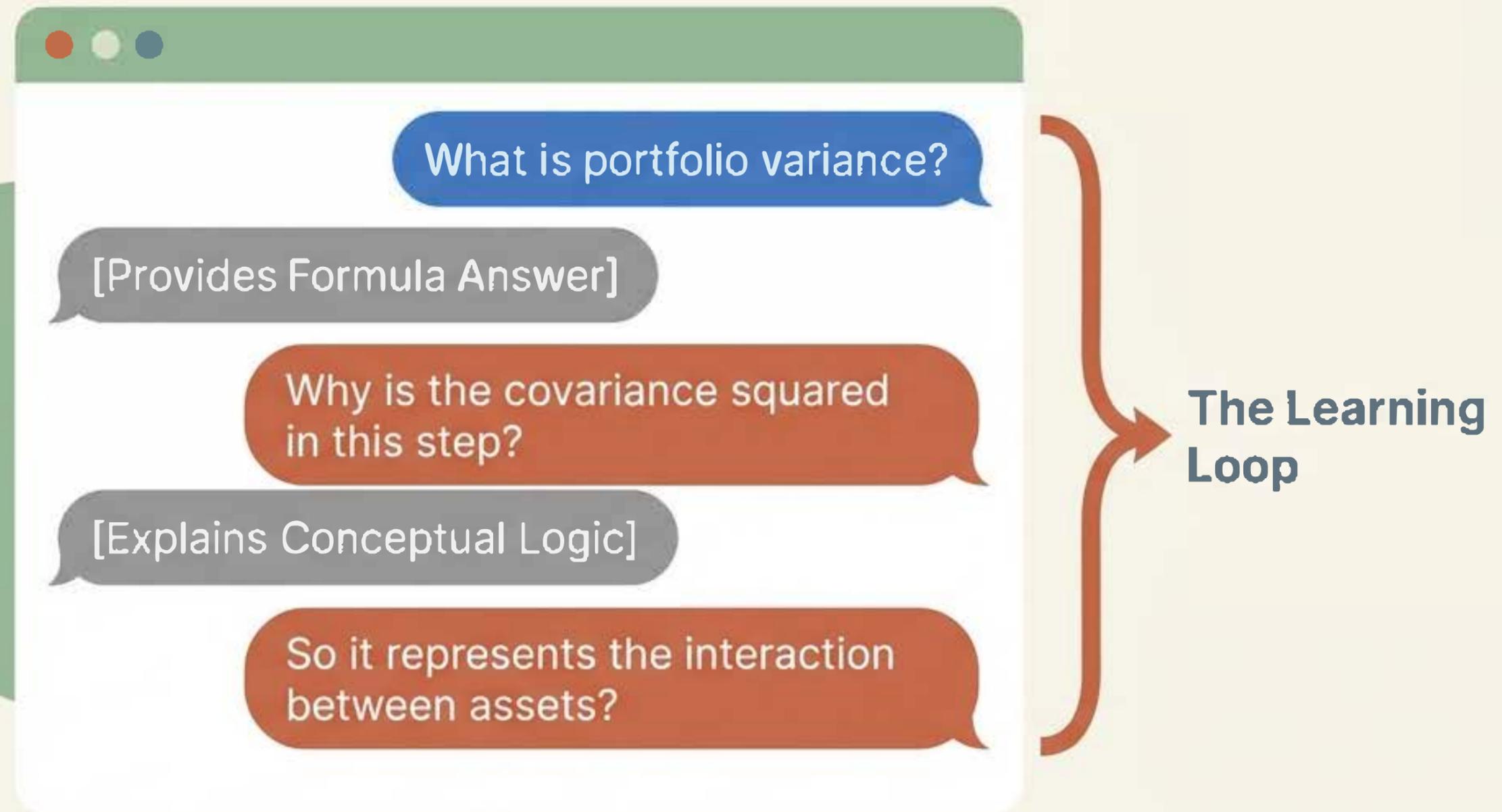
Mode 2: The Socratic Partner (Strategy Validation)



Case Study: Luis

The AI challenged his investment logic. After a "conversation" exposed weaknesses in his hypothesis, he tightened his ROE screen from >5% to >10%.

Mode 2: Deepening Conceptual Grasp

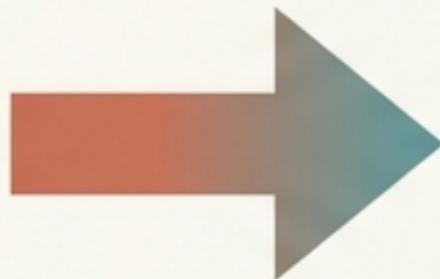


Active Learning: Miguel Ochoa asked follow-ups until he could explain results in his own words.

The Professional Editor: Tone & Polish

Student Draft

~~We sort of looked into the data and it seems pretty good for like, showing potential growth.~~



Final Submission

Our analysis indicates substantial potential for future growth based on the current data...

AI lowered the communication barrier, but the financial reasoning remained the student's responsibility.

Risk: The 'Misinformed' Model

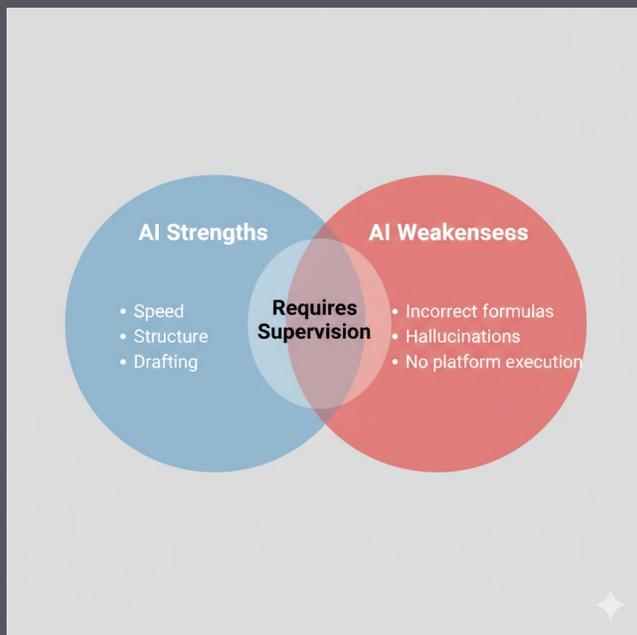


Hallucination Risk Detected.

Student Voice:
**“AI can be wrong
and misinformed.”**
— Jayden.

Students learned they cannot
blindly trust the black box
when models provided
confidently incorrect data.

When AI Is Wrong



Students reported AI being:

- “Wrong and misinformed”
- “Aggravating”
- Unable to walk through FactSet workflows

But something interesting happened.

Because they had to catch errors:

- They learned definitions more precisely.
- They checked formulas manually.
- They compared theoretical versus computed values.

The need to supervise AI deepened understanding.

Investor-Ready Output

Before

- Financial statements are a great way to analyze a company's performance and growth. They provide a detailed look at the company's assets, liabilities, and equity over time.
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After

Q3 Investment Strategy

Market Insights

- **Market Insights**: Detailed analysis of market trends and opportunities.
- **Strategic Objectives**: Clear goals and objectives for the investment strategy.

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Technical Validity Still Graded

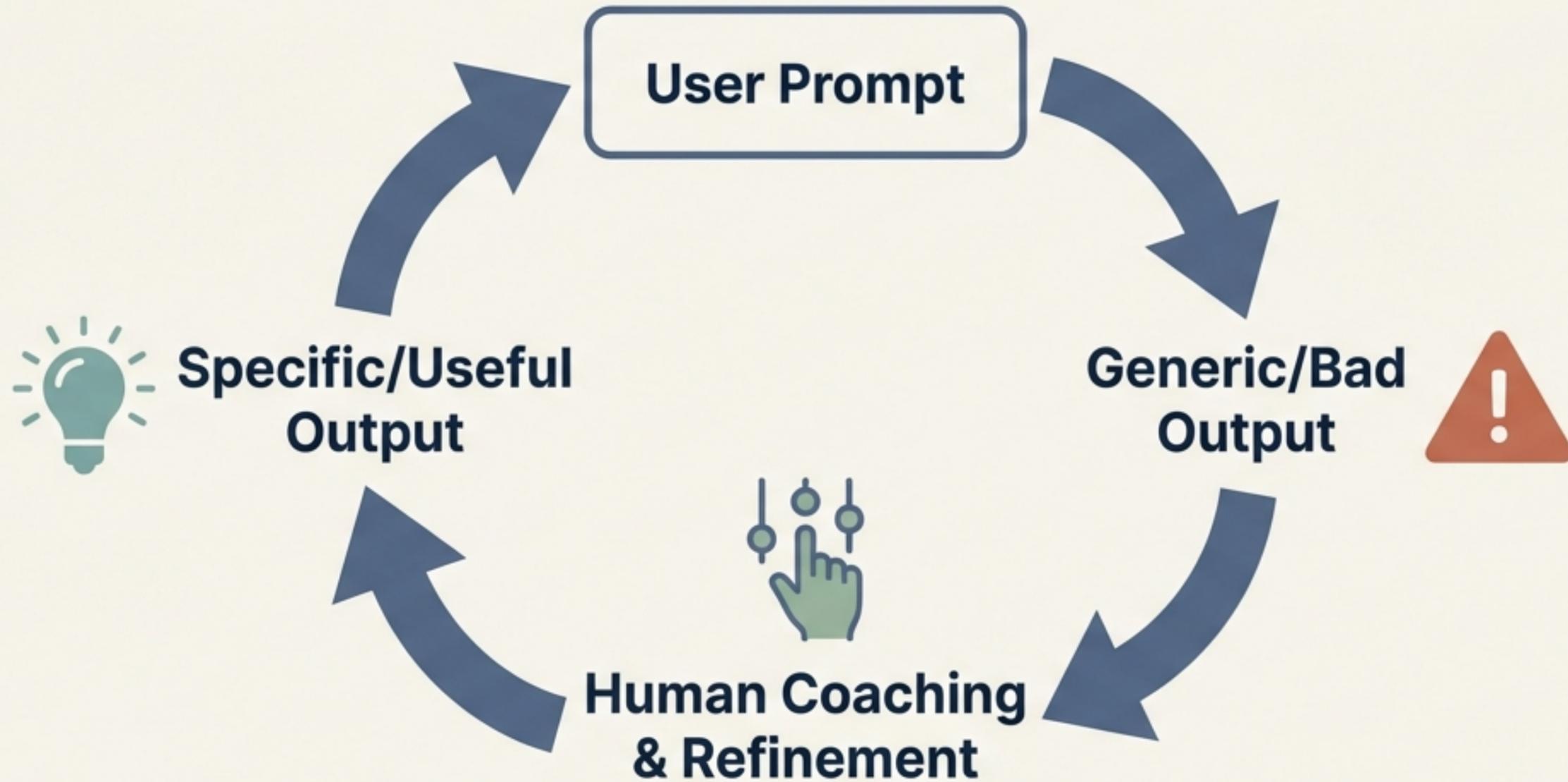
AI also helped in professional communication:

- Polishing investor pitch language
- Structuring decks
- Improving flow and clarity
- Translating technical ratios into investor explanations

For many students, this was their first professional pitch.

AI lowered the communication barrier, but the financial reasoning still had to be theirs.

The Coaching Requirement



Takeaway: “It must be well coached to provide specific assistance.”
AI is not plug-and-play.

Scalability: Beyond Finance

Engineering

Matlab (Hard Tool) + AI Explanation of Simulation



Accounting

Excel Audit (Hard Tool) + AI Drafted Audit Memo



Public Policy

Raw Dataset (Hard Tool) + AI Audio Summary



Marketing

Analytics Platform (Hard Tool) + AI Pitch Deck



The Pattern = Hard Tool + AI Allowed + Required Verification.

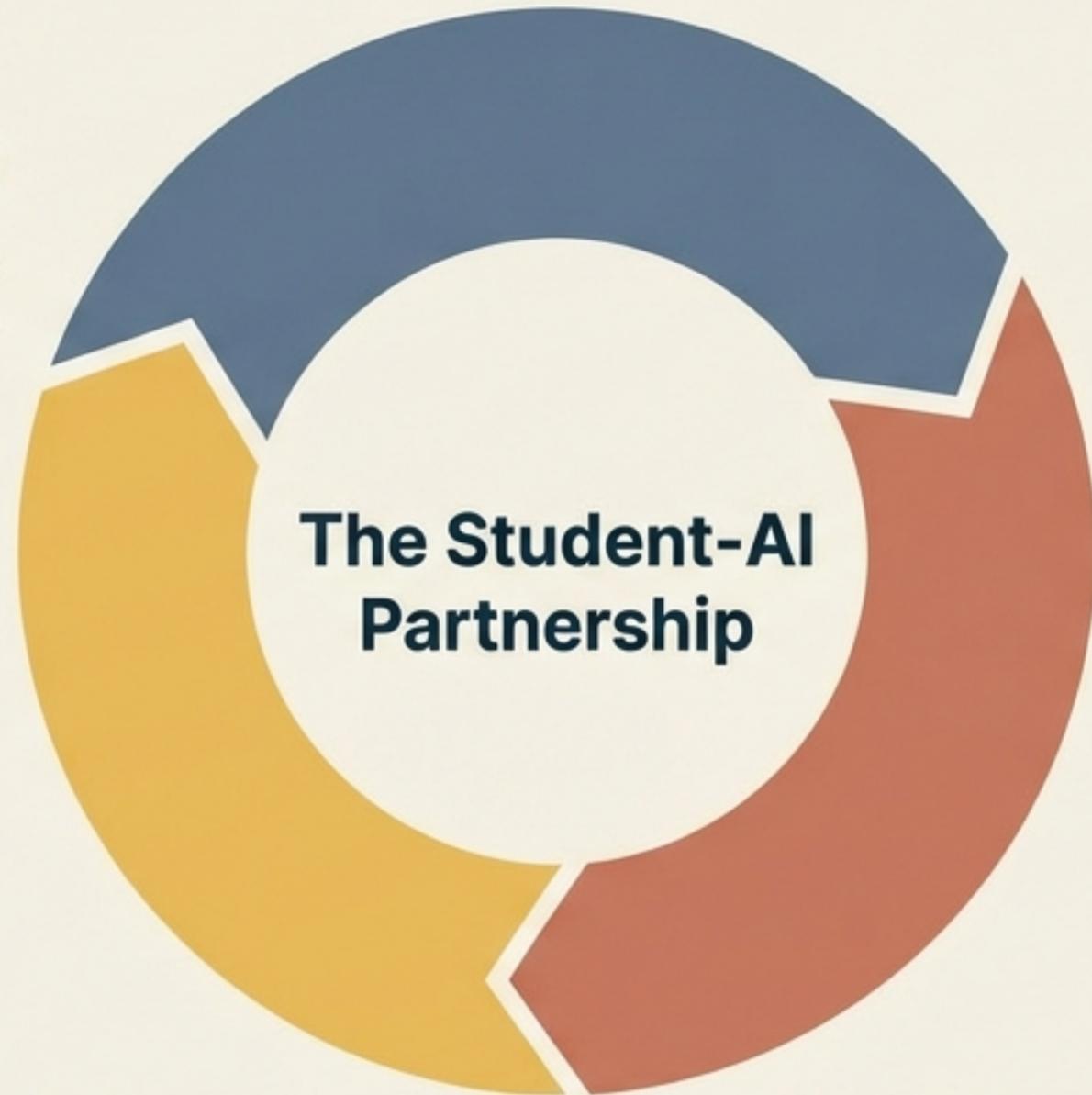
The Ideal Workflow Synthesis

INITIATE & ACCELERATE

Define parameters,
overcome inertia.

VERIFY & GOVERN

Check accuracy, refine
tone, ensure understanding.



AUGMENT & CLARIFY

Stress-test logic, active
questioning.

Successful students do not use AI to bypass work; they use it to upgrade their workflow from manual execution to strategic oversight.

The future of education isn't about
hiding from the machine.

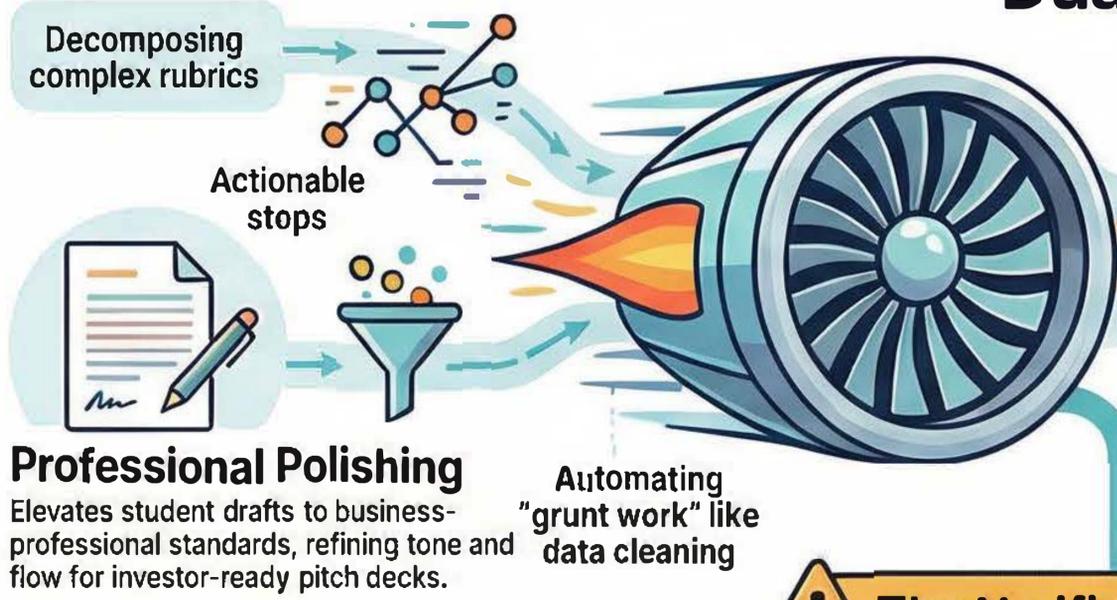
**Teach students to supervise
intelligent systems.**

Adapt the 'Guardrails' model to your curriculum.

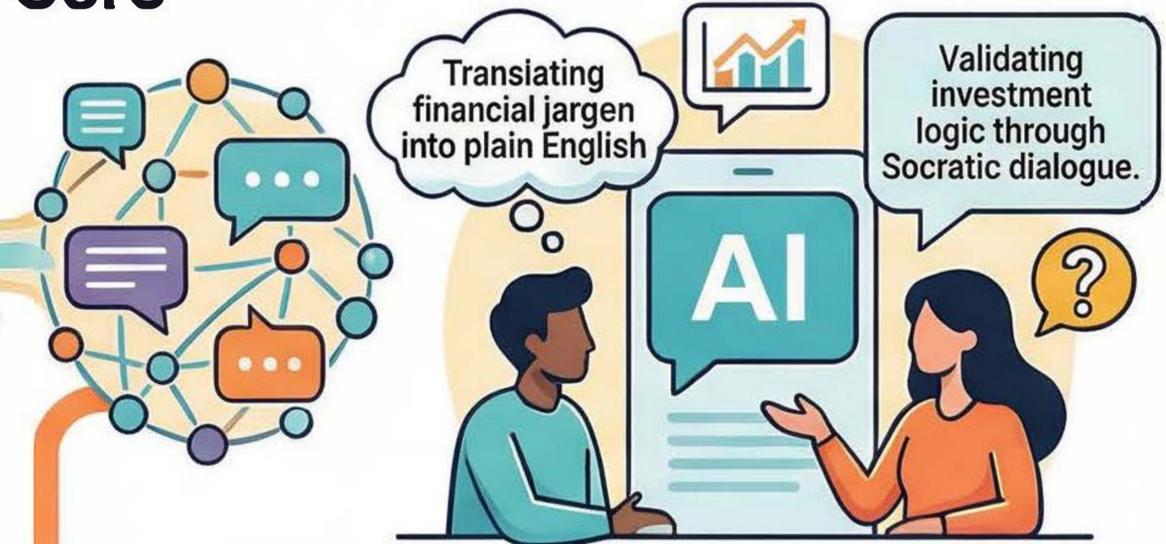
The AI Co-Pilot: Navigating Generative AI in Finance Education

Ivilina Popova, Professor of Finance, ip12@txstate.edu, presentation at 2026 AI in Education Symposium Texas State University

The High-Speed Efficiency Engine

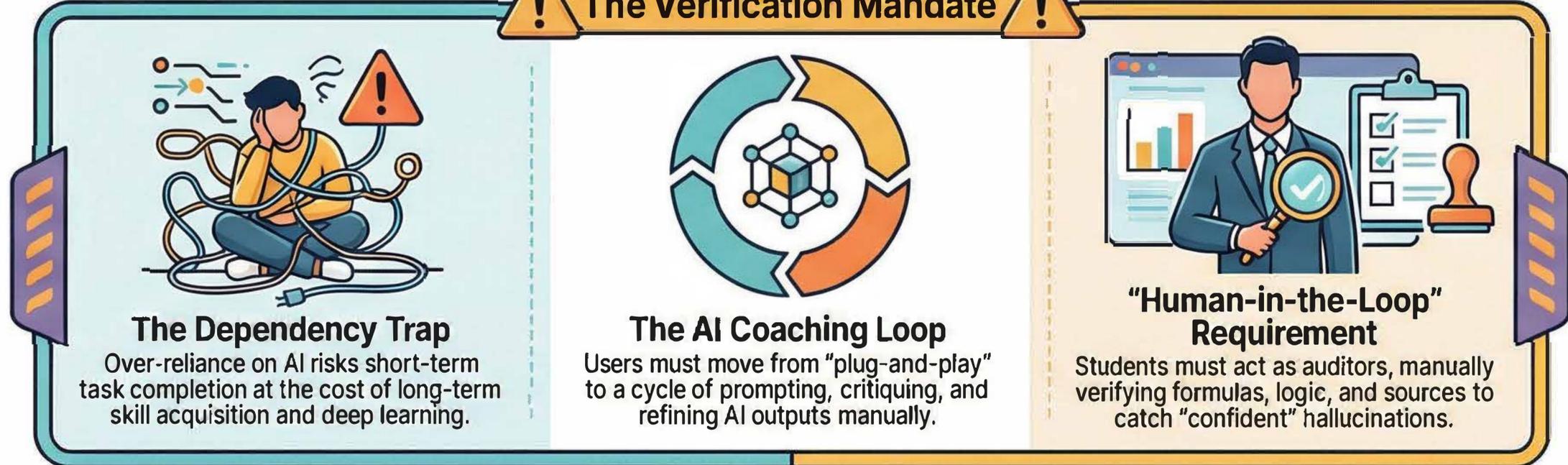


The Personalized Financial Tutor

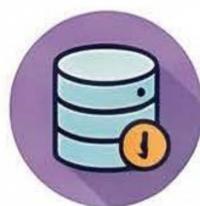


Dual-Core

The Verification Mandate



Quantitative Analysis
Generating and debugging formulas for Sharpe, Sortino, and Treynor ratios.



Data Management
Automating the bridge between raw FactSet exports and analysis-ready Excel models.



Strategy Validation
Stress-testing investment hypotheses by refining parameters like Return on Equity (ROE).