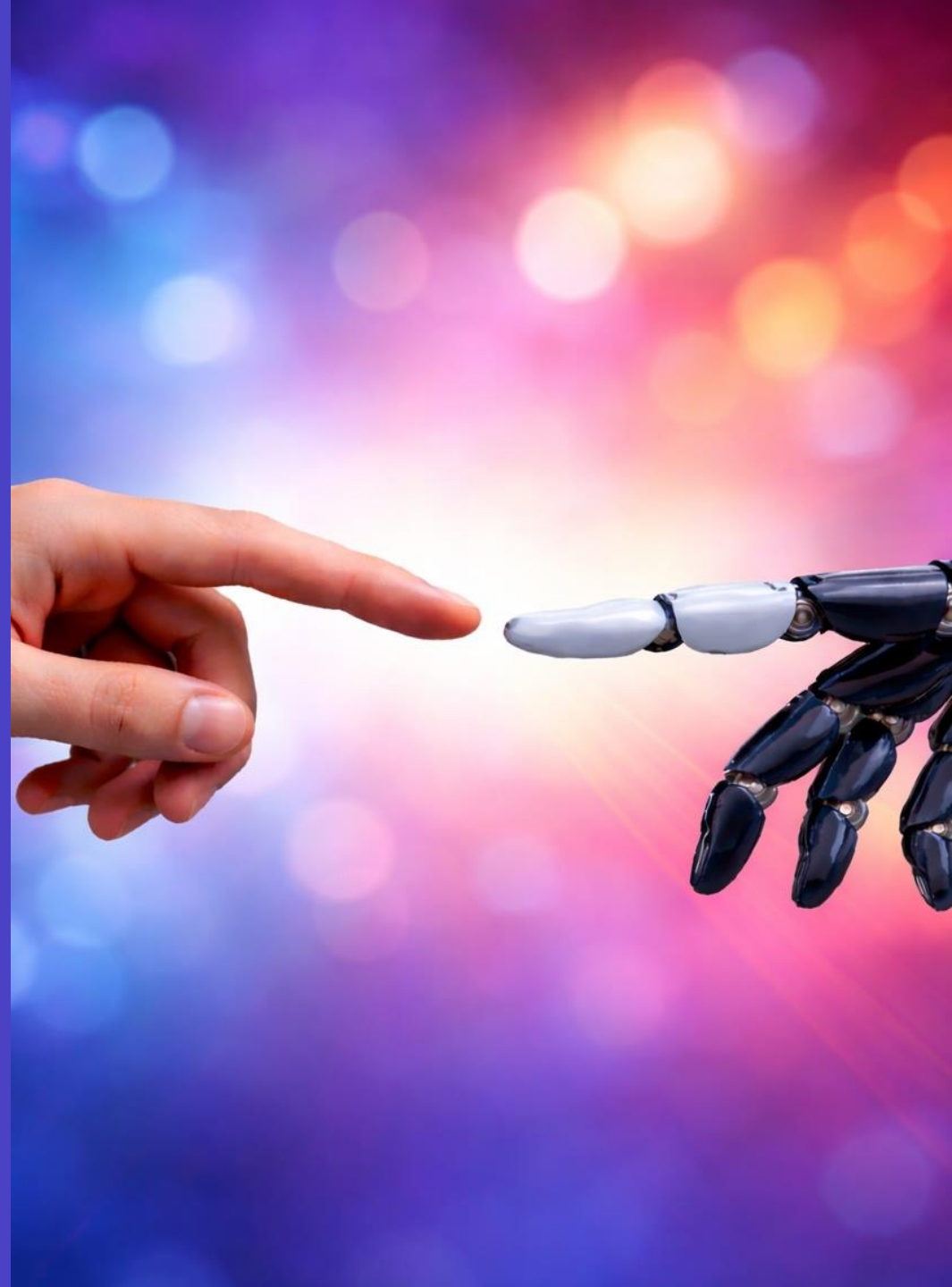


# AI as Collaborator: Developing Critical Thinking, Reflection, and Communication Skills

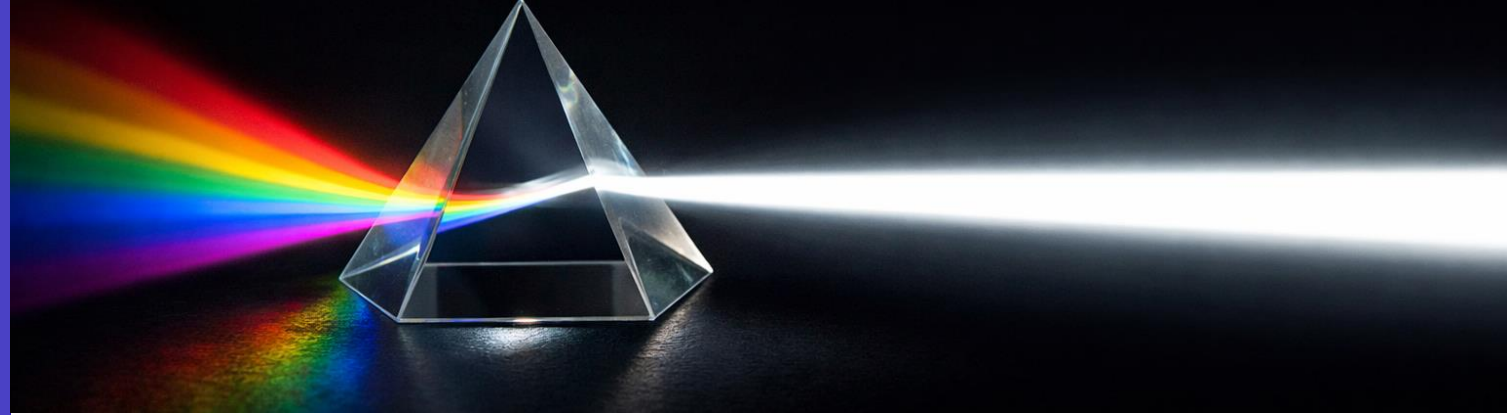
Jessica Hennessey  
Furman University





**Domain Expertise**  
**+ AI Fluency**  
**+ Human Judgment**  
**Quality Outcome**

# Human judgment is the capacity to...



**Frame the problem**

*purpose, audience, constraints, tradeoffs*

**Evaluate claims**

*logic, evidence, assumptions, uncertainty*

**Verify responsibly**

*what to check, what would change my mind*

**Communicate with clarity**

*explain choices, tell the story, recognize limits*

**Reflect and revise**

*Metacognition, learn from feedback, iterate*



**Bad prompt  
(on purpose):  
"Give me a list of the  
10 best restaurants in  
Philadelphia."**

# With a partner:

Don't fix the prompt...interrogate the output.



- **Fit:** Why doesn't this work for me?
- **Assumptions:** What did AI assume about my goals/constraints?
- **Context:** What's missing that I'd need to add?
- **Verification:** What would I check before using this?

# Course innovation: Purpose & Design

## Course Philosophy:

- Goal wasn't to teach AI but to build habits of mind
- AI positioned as collaborator, not shortcut
- Offload tasks, not judgment.

## Course Structure:

Research Project with dual components:

- **Deliverable:** The polished final product
- **Logbook:** Documentation of process and reflection

[Download the Research Project Framework](#)



<https://tinyurl.com/EconProjectAI>

# What students need to learn to supply *(even with AI)*

- Purpose + context
- Definition of “good/best”
- Constraints + tradeoffs
- Values + voice
- Assumptions + uncertainty
- What to verify
- Responsibility for the final decision



# AI as collaborator

## Designing for visible judgment

Human Judgment	What I designed students to do (AI + logbook)
Frame the problem	Example: Start with a <i>bad prompt on purpose</i> → forced to articulate purpose, audience, constraints, tradeoffs
Evaluate claims	Example: Critique AI summaries from annotated bibliography notes for fit/feasibility → identify assumptions, vagueness, and what's "generic" → reject some output and justify why
Verify responsibly	Example: literature review or interpretation of empirical results → identify what's uncertain or likely wrong → specify what to check before using it
Communicate with clarity	Example: Rehearse: 30-second pitch and Q&A with a skeptical audience → revise explanation for clarity and audience
Reflect & revise	Example: Logbook forced annotation of prompts → "what I contributed that AI couldn't" (metacognition)

# Bad Prompt Activity



## Start with Poor Prompt

Students begin with ineffective AI query



## Improve Conversation

Learn to refine questions for better results



## Share Chats

Submit conversations in logbook



## Receive Guidance

Instructor shows alternative approaches

## Effective Evolution



<https://tinyurl.com/EffectiveUseAI>

## Ineffective Evolution



<https://tinyurl.com/IneffectiveUseAI>

# Conversation:

**You are an external evaluator. Ask me 3 questions, one at a time, that probe things like the clarity of goals, alignment between claims and evidence, and limitations/next steps. After each response, briefly evaluate my answer (what was strong and what was missing) and ask one follow-up before moving to the next question.**

*See QR code for more extensive version. I asked, "Structure this prompt using Markdown syntax."*



<https://tinyurl.com/ConversationPromptAI>



# Poster Conversation

- Create Research Poster**  
Prepare academic content for presentation
- Practice with AI**  
AI asks questions about research
- Respond to Questions**  
Student explains research clearly
- Receive Feedback**  
AI offers suggestions for improvement



# Student Reflections

## Research Enhancement

*For research, it really seems to streamline the whole process and take the mundane work out of the project so I can focus on implications and improving the work overall.*

## Balanced Approach

*The logbooks helped reign me in my use, reminding me to use it as a resource, not a supplement.*

## Confidence Boost

*I'm more confident in my ability to ask the right questions, I feel more excited about the possibilities ahead.*

# AI doesn't replace judgment... good course design reveals it.

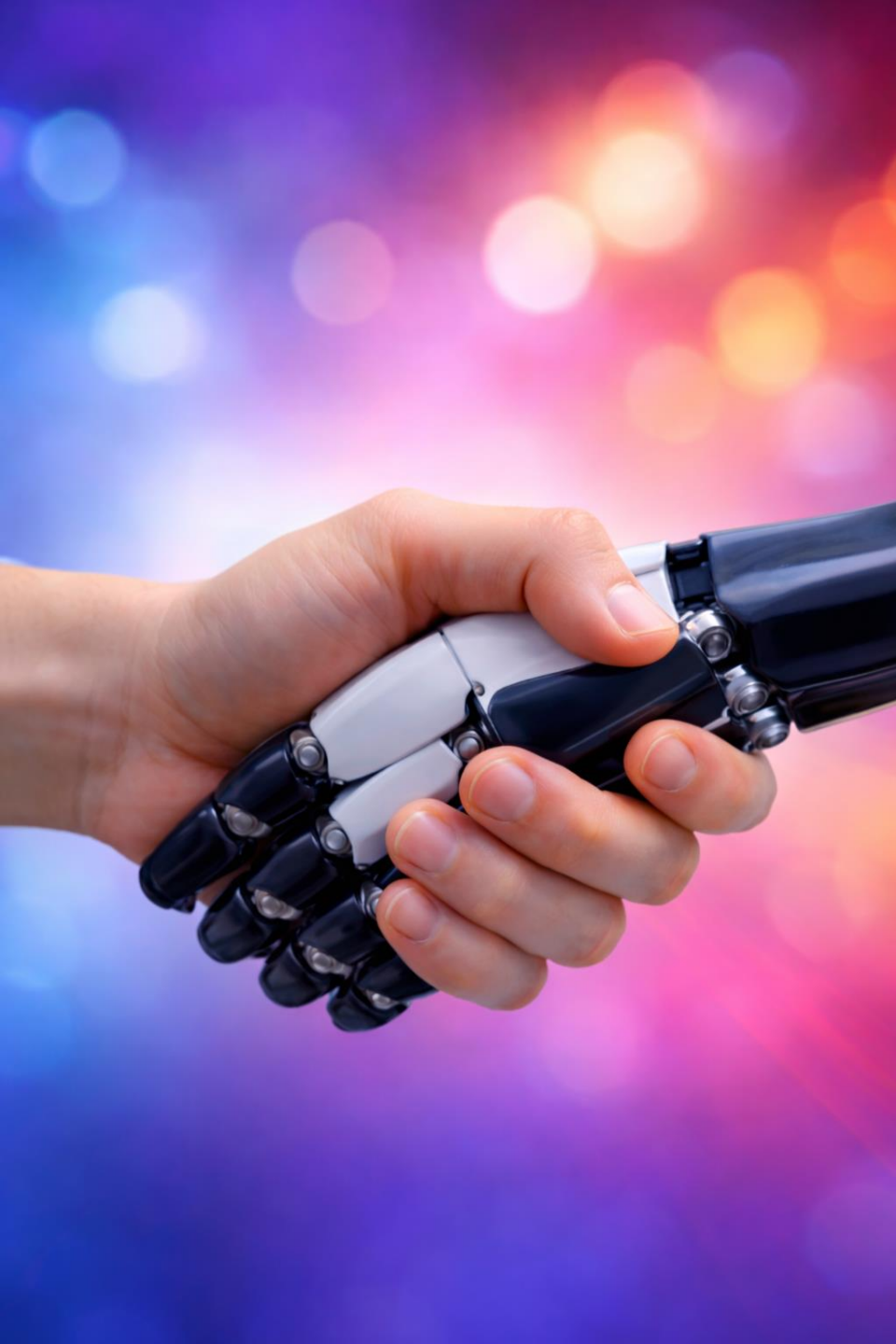
- Output is cheap. Judgment is what students must learn.
- Design AI use so students must supply purpose, constraints, verification, voice.
- Structured collaboration + reflection make thinking visible (and assessable).



# One small change to try next week



1. Start with a bad prompt on purpose (so they have to define "good")
2. Require an "interrogate the output" step (fit, assumptions, context, verification)
3. Add one conversation rehearsal (skeptical Q&A + feedback)



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