



**INNOVATIVE USE OF
AI IN EDUCATION**



AI Development Accelerator



Institute for Excellence in Teaching & Learning

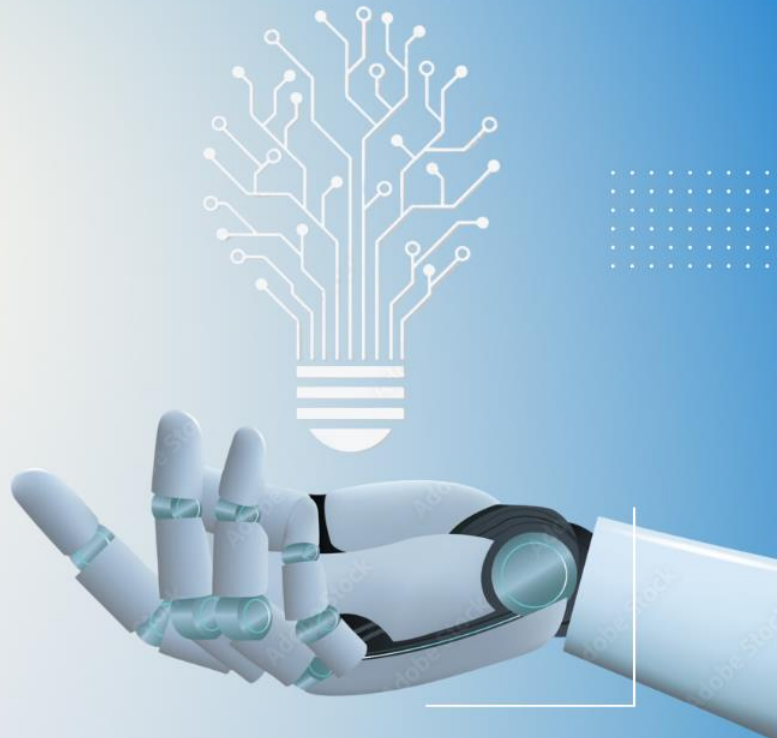
Innovative Use of AI in Business, Education and Communication

December 4, 2025




4:00 PM - 6:00 PM

CDS 1101

665 Commonwealth Ave



AIDA Core Team & Governance

	Name	Title	Organization
	AIDA Core Team		
	John Byers Executive Director	Professor of Computer Science; Former Senior Associate Dean of Faculty for Mathematical & Computational Sciences	College and Graduate School of Arts & Sciences
	Yannis Paschalidis Director, AI in Academics	Distinguished Professor of Engineering; Director, Hariri Institute for Computing and Computational Science and Engineering	College of Engineering
	Bob Graham Interim Chief AI Officer	Associate Vice President, Enterprise Architecture and Applications	Information Services & Technology

AIDA Core Team & Governance

Name	Title	Organization
AIDA Academic Advisory Council		
Joseph Bizup	Associate Dean Undergraduate Academic Programs & Policies	College of Arts & Sciences
Priya Garg	Associate Dean, Office of Medical Education, Chobanian & Avedisian School of Medicine	School of Medicine
Amie Grills	Associate Provost for Undergraduate Affairs	Undergraduate Affairs
Tal Gross	Professor, Markets, Public Policy, and Law	Questrom School of Business
Alexander Olshevsky	Professor (ECE, SE)	College of Engineering
Wesley Wildman	Professor of Philosophy, Theology, and Ethics, and of Computing and Data Sciences	School of Theology
AIDA Administrative Advisory Council		
Diane Baldwin	Associate Vice President, Sponsored Programs	Research
Kevin Gonzales	Assistant Vice President, Operations	Operations
Rhonda Hospedales	Senior Director, Employee Relations	Human Resources
Jen King	Executive Director, Continuous Improvement & Data Analytics	Financial Affairs
Kelly Lockard	Associate VP, Continuous Improvement & Data Analytics	Financial Affairs
Marylou O'Donnell-Rundlett	Associate Vice President, Enrollment Service Operations	Enrollment and Student Administration
Kerri Saucier	Associate Vice President, Advancement Information Strategy	Development & Alumni Relations

What does AIDA do?

■ Mission

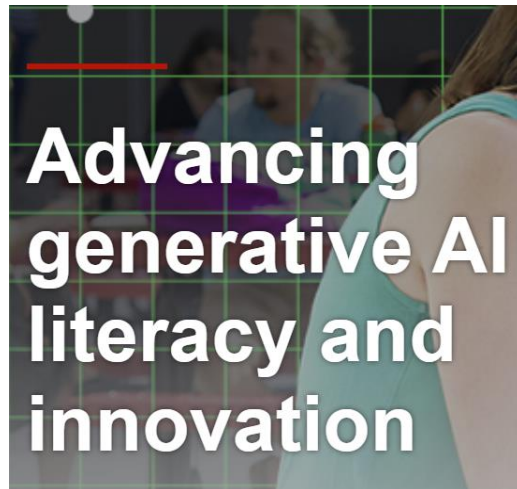
- catalyze the development, adoption, and governance of AI at BU
- advance AI literacy and competence
- comprehensive and coordinated approach across the University

■ Activities in 2025/6

- AIDA Symposia: learning/designing/sharing best practices with AI
- TerrierGPT: access to GenAI models for all faculty, staff, and students
- 4-hour online course for BU undergraduates (released!)
- In-studio 2-hour workshops for BU faculty (Nov 2025) and BU staff (Jan 2026)

+ we seek your input

Boston University Institute for Excellence in Teaching & Learning
AI Development Accelerator



TerrierGPT. About that... Students/Faculty ask:

- *Q: Now we're training another AI model?! Why?*
- *A: It's not a model. It's a gateway to access existing & popular LLMs.*
- *Q: I use ChatGPT. Why would I need or want TerrierGPT?*
- *A: ChatGPT-4.1 is available through TerrierGPT. GPT-5 is coming soon. With ChatGPT, OpenAI is training on your queries. With TerrierGPT, your data is protected. Plus, you get access to other LLMs. It's also **free**.*
- *Q: Does BU see my queries or train on my data?*
- *A: No. TGPT has the same privacy guarantees as your BU email.*
- *Q: In this budget environment should BU be investing in AI?*
- *A: Yes, as BU continues to “build an ambitious vision for the future.” AI is here to stay and we have a responsibility to educate our students.*

AIDA Faculty and Staff Symposia, 2025-2026

- 9/17 – Innovative Use of AI in Humanities and Social Sciences
- 10/1 – AI Usage Policies in Courses: What Works, What Does Not, Else...
- 10/16 and 11/12 – Innovative Use of AI in STEM-related Courses

- 12/4 – Innovative Use of AI in Business, Education, and Communication
- 1/15/26 – Innovative Use of AI by Staff and Administration

- Deeper into Spring 2026
 - Another symposium for Staff and Administration
 - 1-2 for faculty at the BU Medical Campus, 1-2 at the CRC
 - 1 with students: Possible model from Babson: “How students are REALLY using AI”

Faculty AI In-Studio Workshops

- Designed to give faculty space to discuss the role of AI in teaching and learning, and hands-on experience in experimenting with AI tools
- Focuses on the ethical and critical use of GenAI for teaching and learning
- Participants will explore the new [AI at BU Student Certificate course](#).
- Upcoming workshops
 - December 11, 10 a.m. - 12 p.m. (PHO 117)
 - January 15, 10 a.m. - 12 p.m. (PHO 117)
- Registration Link: <https://www.bu.edu/aida/newsandevents/ai-faculty-in-studio-workshops/>



Innovative Use of AI in Business, Education, and Communication



Paul McManus
Master Lecturer,
Strategy and
Innovation;
QST



Paul Carlile
Senior Associate Dean,
Research and Innovation;
Professor,
Information Systems;
QST




Thomas "TJ" McKenna
Director, Center for STEM
Professional Learning at Scale;
Clinical Assistant Professor,
Science Education;
Associate Director of Educator
Engagement and Impact,
AI and Education Initiative;
Wheelock



Jing Yang
Assistant Professor,
Advertising;
COM

Boston University Institute for Excellence in Teaching & Learning
AI Development Accelerator



An aerial photograph of Boston, Massachusetts, showing the harbor, the city skyline with various skyscrapers, and green spaces. The image is used as a background for the title text.

AI and Education: Dialogic AI, Not Transactional AI What AI Means for Disciplinary Reasoning and Sensemaking Across Fields

Dr. Thomas 'TJ' McKenna

Director of the Center for STEM Professional Learning at Scale

Clinical Assistant Professor of Science Education

Associate Director of Educator Engagement and Impact, AI and Education Initiative

Boston University Wheelock College of Education & Human Development

**AIDA Symposium:
Innovative Use of AI in Business,
Education, and Communication**

Dec 4, 2025

Leveling Up for Informed Discourse,
Dialogue, and In-Class Discussion:

The QST-SM131 Business, Markets, and Society

Paul McManus

Master Lecturer, Strategy and Innovation, Questrom

Paul Carlile

Senior Associate Dean, Research & Innovation;
Professor, Information Systems, Questrom

BOSTON
UNIVERSITY

Boston University Questrom School of Business

Ravi K.

**Mehrotra
Institute**

for Business, Markets,
and Society

Our Question

*How might we use GEN-AI-powered improvisational learning experiences to **foster discourse, encourage discussion and prepare students** for an in-class roleplay/debate on the topic of ethics and the role of business in society?*

Phase 1: Exploratory Research (Fall 2024)

We explored:

- Tutors
- **Role-based Play/immersion**
- Interactive scenario simulations

We observed three core developmental steps were critical to success. Students need to:

- **Leveling Up on Subject Matter** – to have full command of fundamental topics being studied
- **Leveling Up Within Roles** – to develop knowledge of and informed perspective on the topics from *within* their real-world roles.
- **Leveling UP Across Roles**– to learn to how to engage, interact and navigate conflict *across* conflict across a complex multi-stakeholder landscape.

Phase 2a: Development (Spring 2025)

Course: QST SM 1321 Business, Markets and Society (Req'd UG Core)

Subject Matter: SM131 provides students with a philosophical, economic, and applied foundation for understanding the functions of business and the role of business, markets, governments, and other stakeholders in society.

The Case: Coca-Cola and PepsiCo clash with villagers, NGOs, and regulators and other stakeholders over rights and fair usage of the local water resources in a small farming community in rural India.

The Setup: (Custom ChatGPT 4o)

8 stakeholder roles:

- Executive, Coca-Cola/Pepsi Executive
- NGO Leader
- Local Farmer/Villager
- Government Health Official
- Local Business Owner
- Coke/Pepsi Factory Worker
- Water Rights Activist
- International Investor

Structure:

- 4 Modules, 45 – 60 min duration
- 15–20 live Socratic prompts/session
- 3 level of discussion
- 9 embedded Knowledge Check Q's
- 2 reflective writings (250 words)
- Every interaction personalized to each student.
- No “non answers” or easy outs

Course: QST SM 1321 Business, Markets and Society

(Req'd UG Core)

- **Module 1:** Level Up on foundational ethical and strategic frameworks
- **Module 2:** Level Up on stakeholder roles (Based on Specific Role)
- **Module 3:** Level-up on stakeholder interactions and conflicts
- **Module 4:** Practice Roleplay and Reflection

Example: Module 1: Ethical and Strategic Frameworks

(Leveling Up on Foundational Theory and Concepts)

Introduction – You are now stepping into the role of a **multinational soft drink company CEO** operating in India. You are accountable to shareholders, navigating community backlash, environmental scrutiny, and complex stakeholder demands — all while trying to grow the business.

Here is **Module 1: Ethical and Strategic Frameworks** we'll examine your role through **three lenses**:

- Milton Friedman (profit-first, shareholder primacy)
- Edward Freeman (stakeholder theory)
- Porter & Kramer (shared value strategy)

Example Module 1 entry level Questrom from ChatGPT

“According to Friedman, If local communities are protesting your company’s water usage, but your operations are legal and profitable, do you have any obligation to respond to their concerns? Why or why not?”

Two follow-on questions are shaped by and escalate in depth breadth and complexity based on student’s response

Phase 2b: Deployment (Spring 2025)

SM131 Spring 2025 deployment:

- 450+ First-Year Undergrads
- 12 Sections
- 6 Faculty (FTT, NTT & Adjuncts)

Outputs, based on anecdotal feedback from students, faculty and review of individual student deliverables:

- 450+ participants (~100% participation rate)
 - ~ 95% completion rate
 - ~45-60 mins typical engagement time
 - ~13,000+ (~28/student) instances of interaction, dialogue & feedback on course topics
 - ~225,000+ words of reflective writing (~ 500/student)
- Student Rejections/Sentiments:
 - 94% called out deeper insight into stakeholder tradeoffs in
 - 73% called it the most meaningful experience of the course

Sample Student Reflections (Spring 2025)

“The AI wouldn’t let me dodge. It kept asking “why?”. I’ve never had to defend my thinking that sharply in any class.”

“I walked in thinking the executive was the villain. Then I had to be them.”

“I didn’t realize how hard this would hit until I had to argue for something I didn’t believe. It made me question my assumptions about business entirely”.

“I didn’t just learn about stakeholders. I became one. That shift changed everything.”

“Ethics felt fake until this. For the first time, it mattered what I said—and how I said it.”

Phase 3: Deployment (Fall 2025)

SM131 Fall 2025 deployment:

- 900+ First-Year Undergrads
- 30+ Sections
- 18+ Faculty (FTT, NTT & Adjuncts)

Outputs: (TBD)

- The Exercise was just run on the week on Nov 17-25

Additional Development Underway

Summer/Fall 2025

- Partnered with BU-SAIL for full general purpose, development/deployment app
- Standalone app:
 - Hosted by NERC-HPCC
 - SSO/KEREROS Login/Credentialing and user-friendly student UX
 - Very Basic Faculty Admin/Tools for student onboarding and prompt deployment
 - General purpose LLM adapter allowing plug and play with any Gen-Ai API
 - Very Basic backend for student deliverable capture, archiving and analytics

Spring 2026 (TBD i.e. Wish List)

- Integrate the front end with Course Registration system for automated onboarding
- Integrate with Blackboard for LMS/In course deployment
- Fully Instrument the back end to support deep analytic, and logistical study of Student learning

Thanks

This would could not have be undertaken with the support and encouragement of:

- Ravi K. Mehrotra Institute for Business, Markets and Society
 - Board of Advisors * Leadership Team
 - Marcel Rindlisbacher, Director
 - Susan Murphy, Director of Strategic Initiative and Programs
- SM131 Faculty
 - Rebecca Nichols, Master Lecturer & SM131 Course Coordinator
 - 35+ other faculty members
- BU-SAIL
 - William Thompson,
 - Colin Bolles

Connect with Us!

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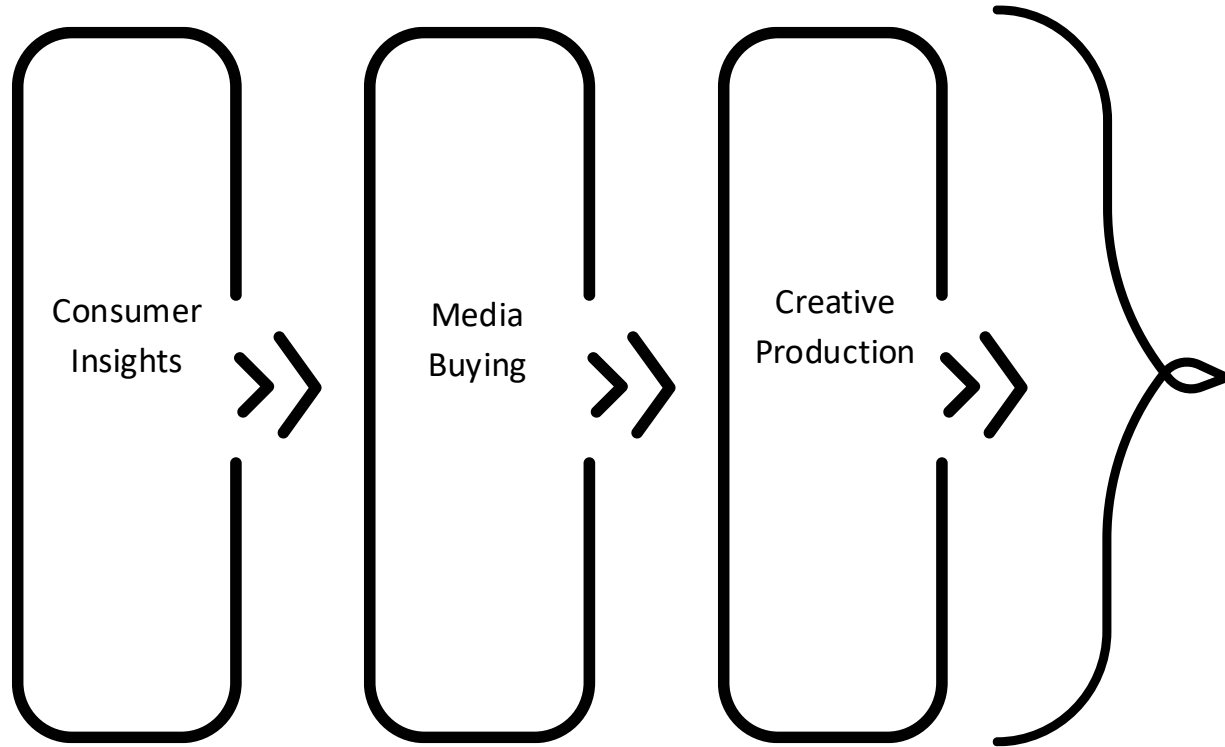
Introducing & Innovating with AI: an Advertising Course Example

Dr. Jing Yang
Assistant Professor
College of Communication
Boston University

BOSTON
UNIVERSITY

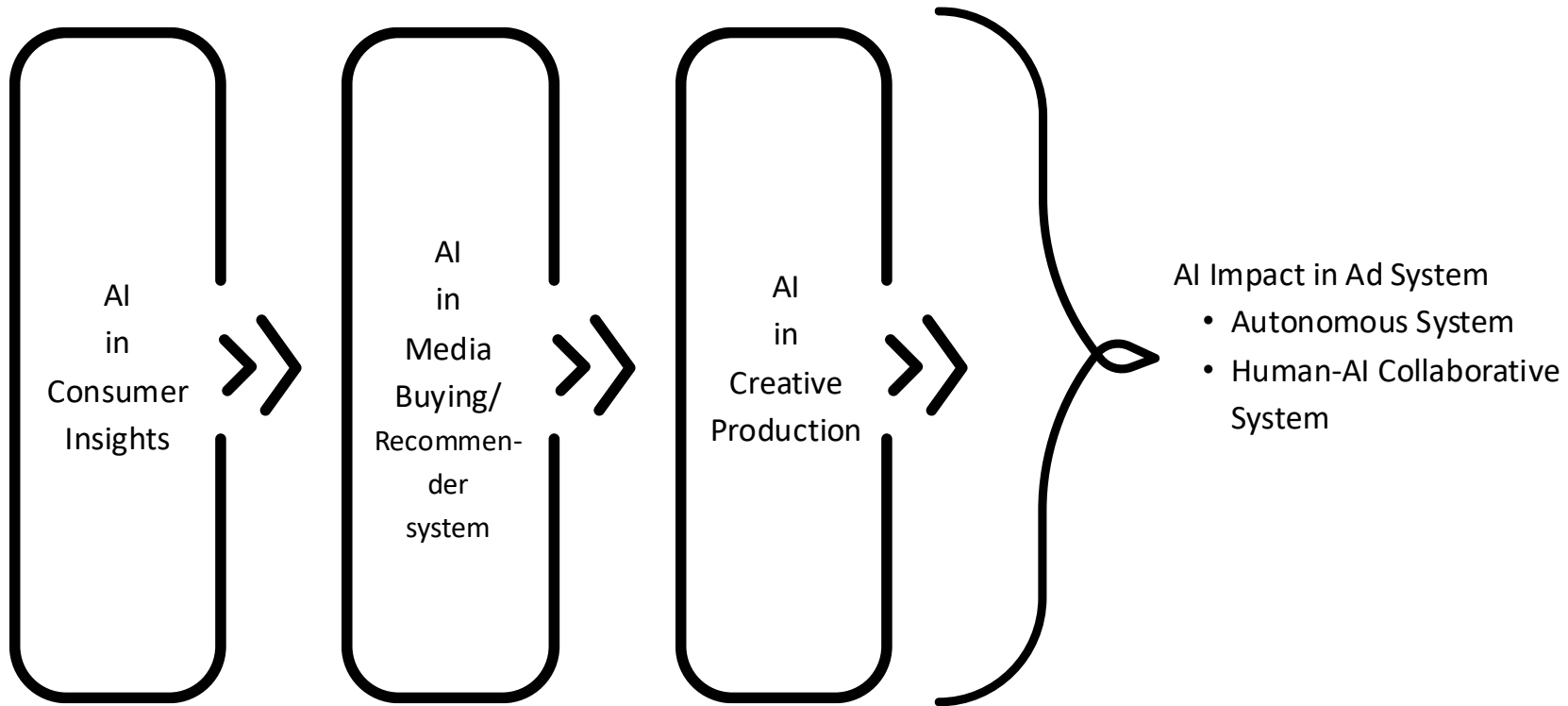
The Essentials of Advertising/Persuasion

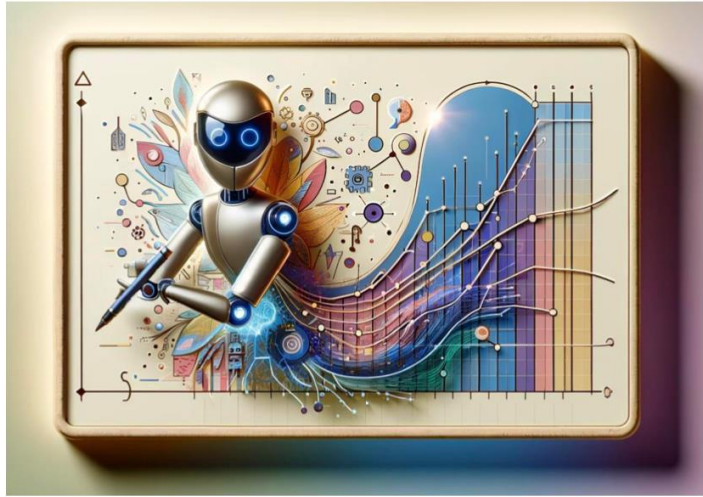
**|| "MEET
CONSUMERS/AUDIENCE
WHERE THEY ARE" ||**



Advertisements







COMM370 (since 2019)
AI ADVERTISING

The Goal of this Class:

Build Forward-thinking
Mindset and
Experiment with AI for
Advertising Scenarios



COMM370 (since 2019)
AI ADVERTISING

Course Learning Outcomes:

Students who complete this course successfully will possess:

- Fundamental/some philosophical understanding/thinking of what artificial intelligence is.
- Ability to understand the basic logics behind the execution of AI Advertising.
- Ability to create, present and implement advertisements/commercial solutions using AI-empowered technologies.
- Critical thinking of the ethical issues related to the adoption of AI in advertising and the society.

#NoCoding

Course Weekly Content Calendar (subject to change)

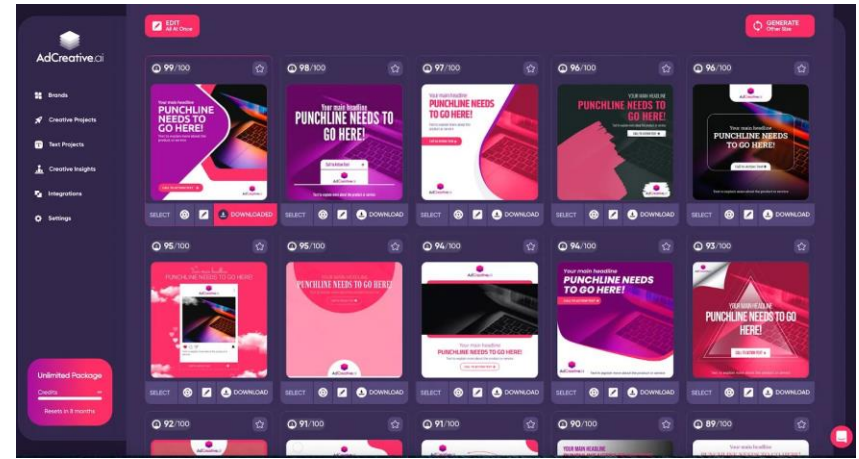
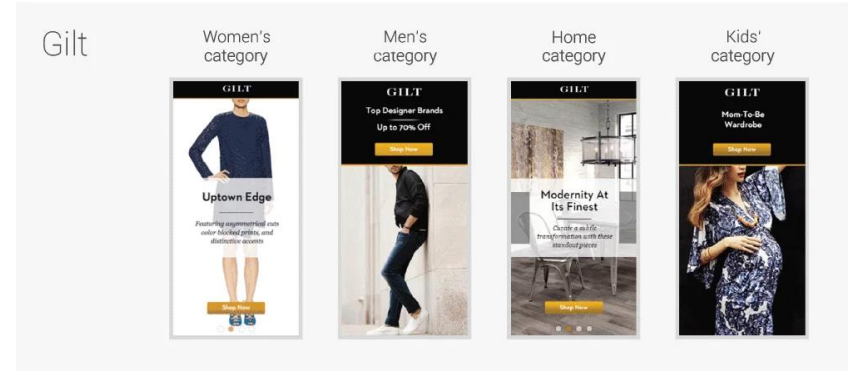
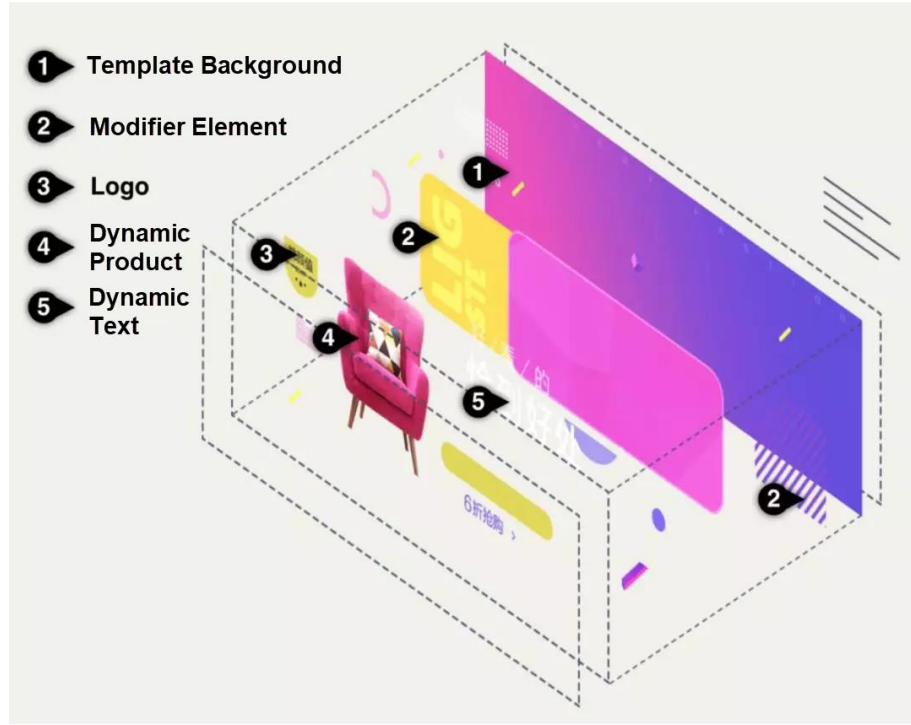
	CONTENT
Week 1: Introduction Jan.16 th	Course Overview
Week 2: General Knowledge about AI Jan.23 rd	Group Formation & Expectations What is AI? & How AI works?
Week 3: AI in Consumer Insights Jan. 30 th	AI in Consumer Insights
Week 4: AI in Media Planning Feb. 6 th	AI in Media Buying and Recommender System
Week 5: AI in Ad Creative Feb. 13 th	AI in Ad Creative & Production
Week 6: AI in Ad System Feb.20 th	How AI Impact the Ad System? (Release of the project #1)
Week 7: Meeting with Jing Feb. 27 th	Meeting with Jing
Week 8: Spring Break	
Week 9: Project 1 Execution Week Mar.12 th	Project 1 Execution Week
Week 10: Project 1 Presentation Week Mar. 19 th	Project 1 Presentation
Week 11: Mar.26 th AI Agent	AI agent function design (Release of Project #2)
Week 12: Apr.2 nd AI Agent Design Demo	AI agent design demo
Week 13: Apr.9 th Meeting with Jing	Meeting with Jing
Week 14: Apr.16 th Project 2 Execution Week	Project 2 Execution Week
Week 15: Apr.23 rd Project 2 Presentation Week	Project 2 Presentation

AI-assisted Advertising Campaign

AI Agents

Vibe Coding

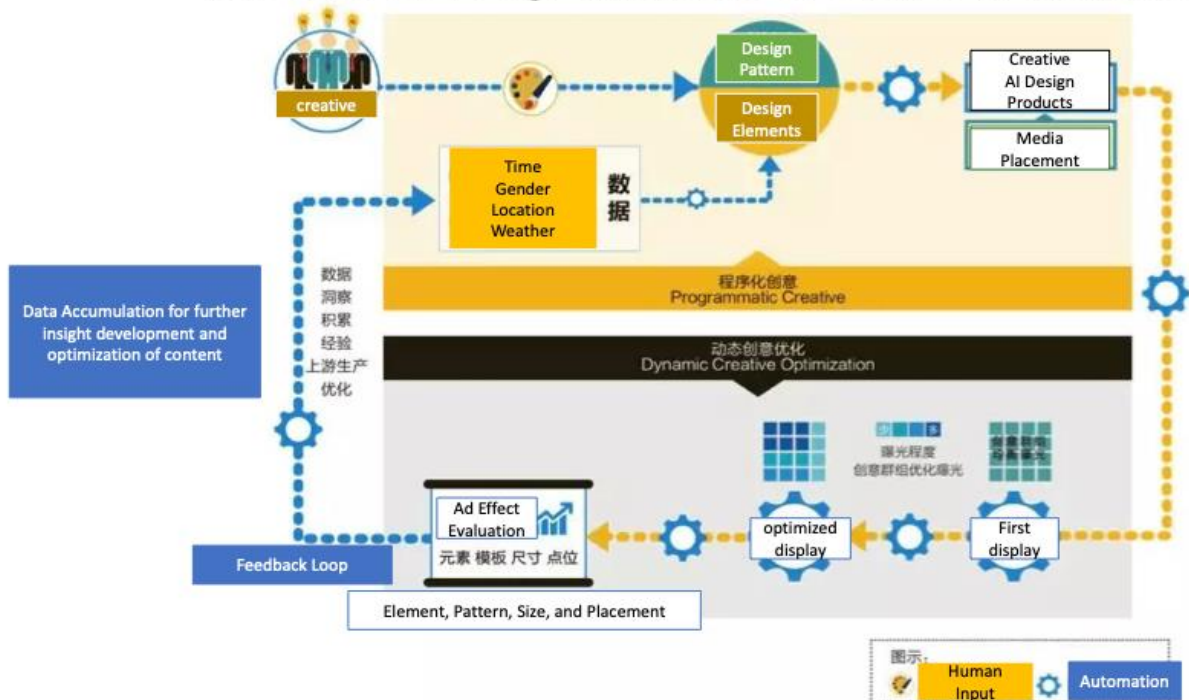
Programmatic Media



Workflow Updates with AI/GAI Integration

- (Semi)Autonomous AI System

Process of Programmatic Creative Work Flow





ChatGPT



perplexity

Gemini

Claude



Midjourney



Adobe Firefly



DALL·E

Gemini



KREA



runway



Speechify



MINIMAX



Suno



*AIGC_mj_v4



*AIGC_mj_v6

- **How Do I use These Tools?**
- **What changes it brings to my workflow?**
- **How do I ethically implement the new tools and make right decisions?**

Prompt Engineering

the practice of crafting and refining instructions (prompts) to guide AI models, particularly large language models (LLMs), to produce desired outputs.

Prompt Engineering

[Style], [Composition], [Camera Details], A [Subject], [Action & Emotion] in a
[Setting and Atmosphere], with [Lighting & Mood] --ar [aspect ratio] --no
[Exclusions]



Midjourney Bot ✓ BOT Today at 4:04 PM

a man with a backpack, with mountain in the background - @jyang13 (fast)



U1

U2

U3

U4



V1

V2

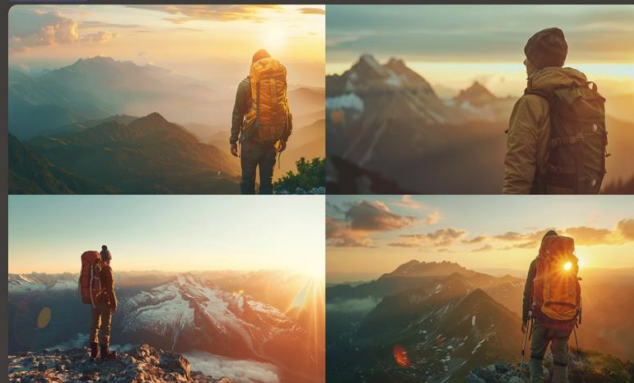
V3

V4



Midjourney Bot ✓ BOT Today at 4:10 PM

bright and earthy, over the shoulder shot focusing on the backpack with the background featuring mountains, medium aperture for balanced depth of field, both the subject and the vastness of the landscape are shown clearly. An adventurer standing on a mountain peak at sunrise, looking out the next mountain, the atmosphere is lonely yet accomplished. warm morning light with soft shadows to convey hope. --ar 16:9 - @jyang13 (fast)



U1

U2

U3

U4



V1

V2

V3

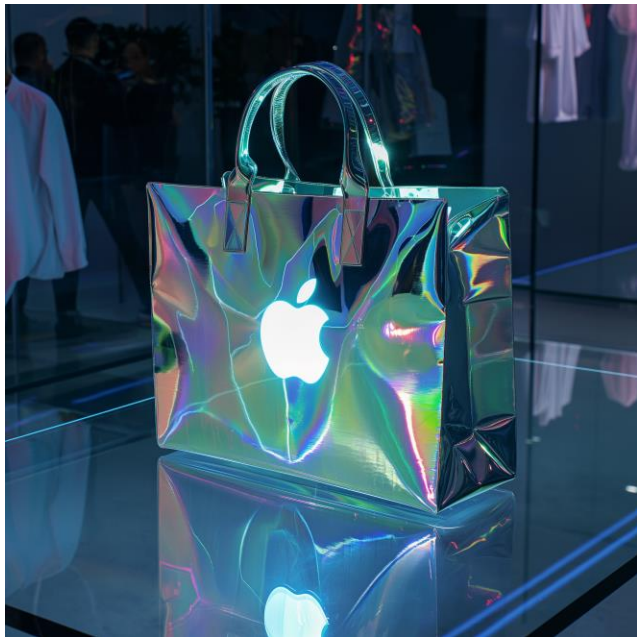
V4



Midjourney



Style Reference in MidJourney --sref




- a futurist bag with Apple's logo on it, reflective materials, and stage it in the center of a display table --v 6.0

Style Reference in MidJourney --sref



- realistic photo of a man standing on the mountain with a nice travel backpack, over the shoulder shot

Style Reference in MidJourney --sref


jyang13 used  imagine



Midjourney Bot  APP Today at 6:59 PM

<https://s.mj.run/9hMpDTKJYUM> The image is in the style of photorealistic fantasies with reflective surface of the bag with a industrial elegance and minimalistic product design. A photo shot from behind of a man wearing a silver backpack with Apple's logo sitting on top of it. The Man is standing in an open landscape with mountains seen at a distance --ar 3:4 --sref

<https://s.mj.run/qyv0akBUyeQ> - @jyang13 (10%) (fast) (edited)

 Only you can see this • [Dismiss message](#)

Style Reference in MidJourney --sref



a bottle of body wash sits on top of an open book, next to it is half a lemon and some other fruits. The background wall was light yellow tones with some shadows. In the style of product photography, the "chill more" brand logo appears on one side of the white paper, which gives people a sense of calmness. A soft beam of sunlight shines from above onto two organs placed at different angles. --ar 3:4 - [@jyang13](#) (fast)





Untitled



Share



G

STUDIO POR...



FLORAL PAT...



GRAPHIC FL...



TROPICAL L...

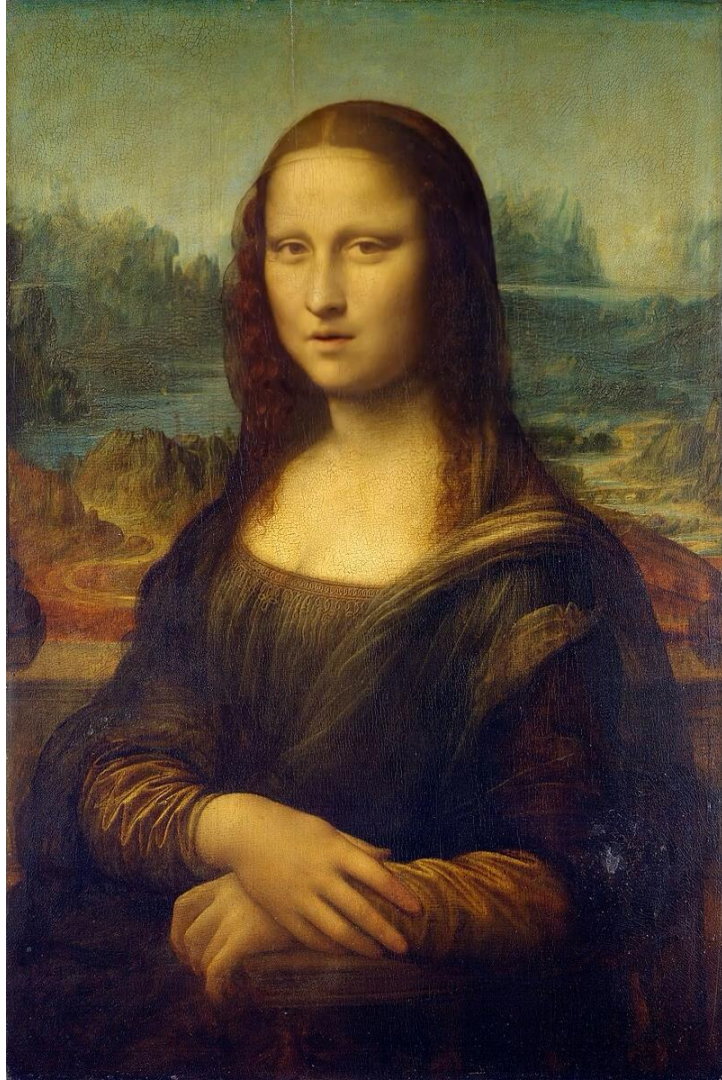


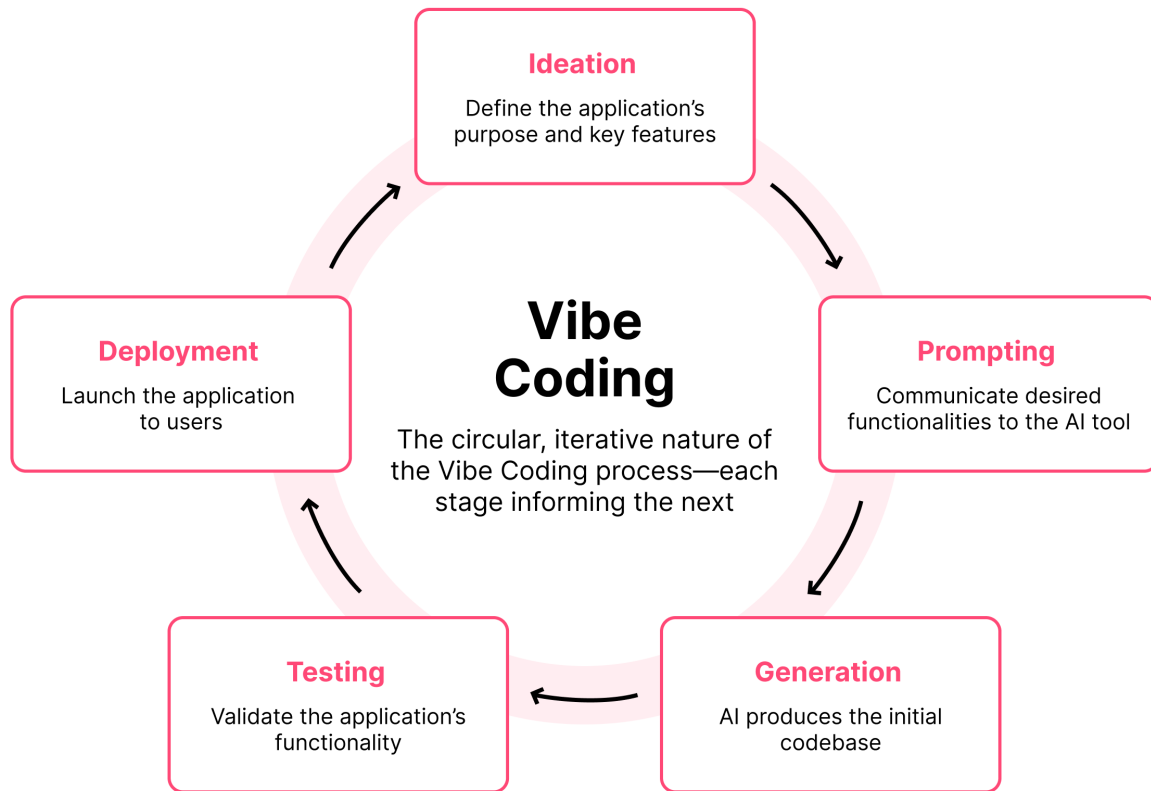
5.9K

Tasks 0 active



RUNWAY - LipSync





Student Works Example

VALUE PROPOSITION OF THE AI AGENT



Introducing Culturingo!

Culturingo is a chatbot feature designed to easily integrate with users' language learning journeys. While completing lessons, users can click on the Culturingo icon to ask personalized questions about cultural norms, traditions, or real-world context related to the language they're studying. Whether you want to know about dining etiquette, holidays, or slang in a specific country, Culturingo provides instant, conversational answers that deepen cultural awareness alongside language skills. It's like having a cultural guide at your fingertips, helping users not just speak the language, but truly live it.

DESIGN



Select the owl you want and the color!

1

Select the culture/country you want to learn about!

2

You can only pick from the 43 languages available and there associated cultures/countries.

Select the decorations to put around your owl!!

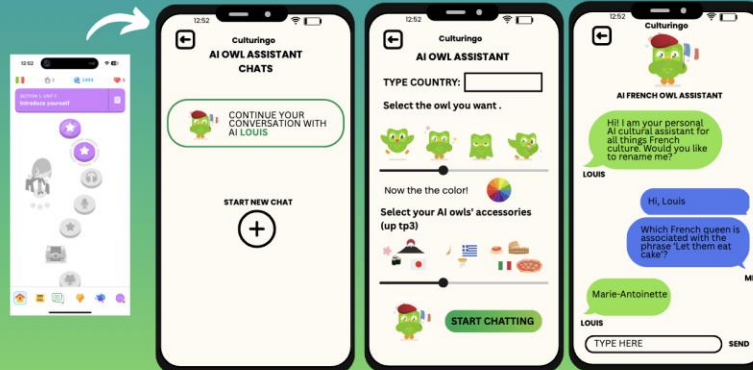
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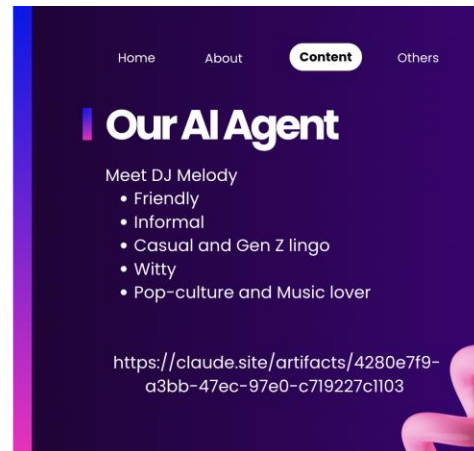
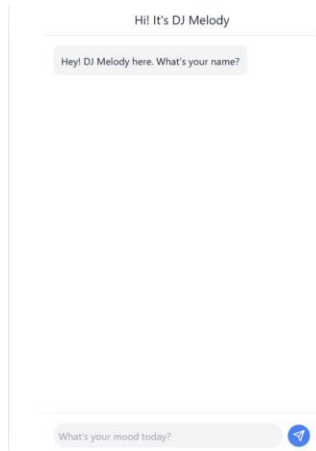
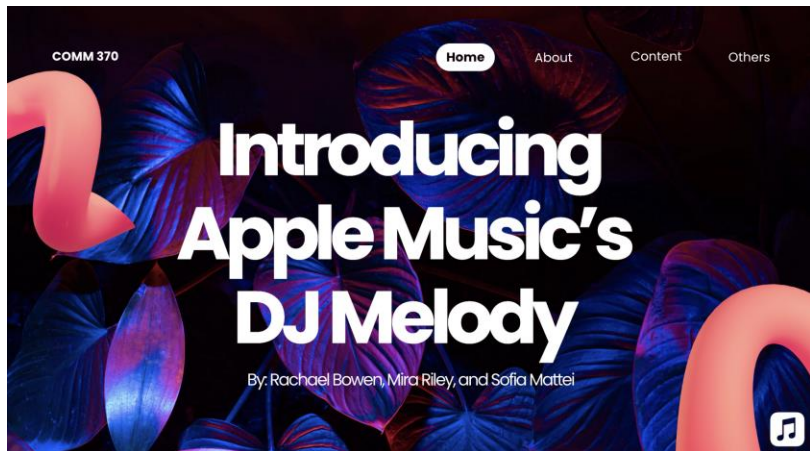
Then start chatting with your personalized cultural AI assistant

4

You can name your own assistant and can ask them any question about the country or culture that correlates with the language you are learning.

EXAMPLES





Professors should Vibe Code too!

Social Media Recommendation System Simulation

Interact with videos to see how algorithms learn your preferences

Your Feed

↗ Video 1 of 6

TikTok

🔥 95% engagement



Comedy Skit
SIMULATED VIDEO

@ComedyKing
ENTERTAINMENT CONTENT

#comedy

#funny

#viral

🌟 Score: 58



Digital Advertising Evolution Canvas

Drag elements onto the canvas and arrange them in circles, lines, or custom patterns to show relationships and evolution

Boston University | College of Communication

How to Use

1. Drag elements from the sidebar to the canvas
2. Arrange them freely to show relationships
3. Create your own timeline visualization!

Milestone Cards

TikTok/short-form video scale

First banner ads go mainstream
(mid-1990s)

Major privacy changes (GDPR/ATT)

iPhone → always-on mobile shift

Generative AI enters ad tooling

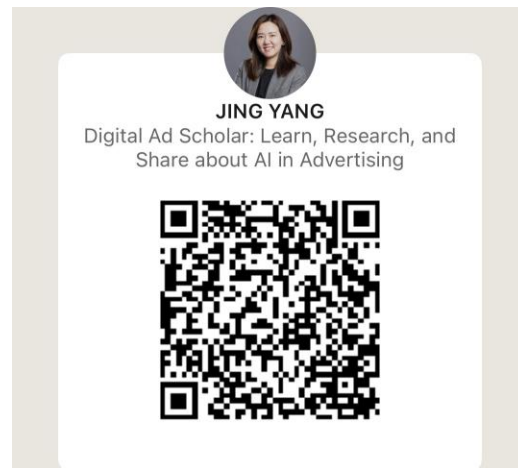
Paid search auctions mature

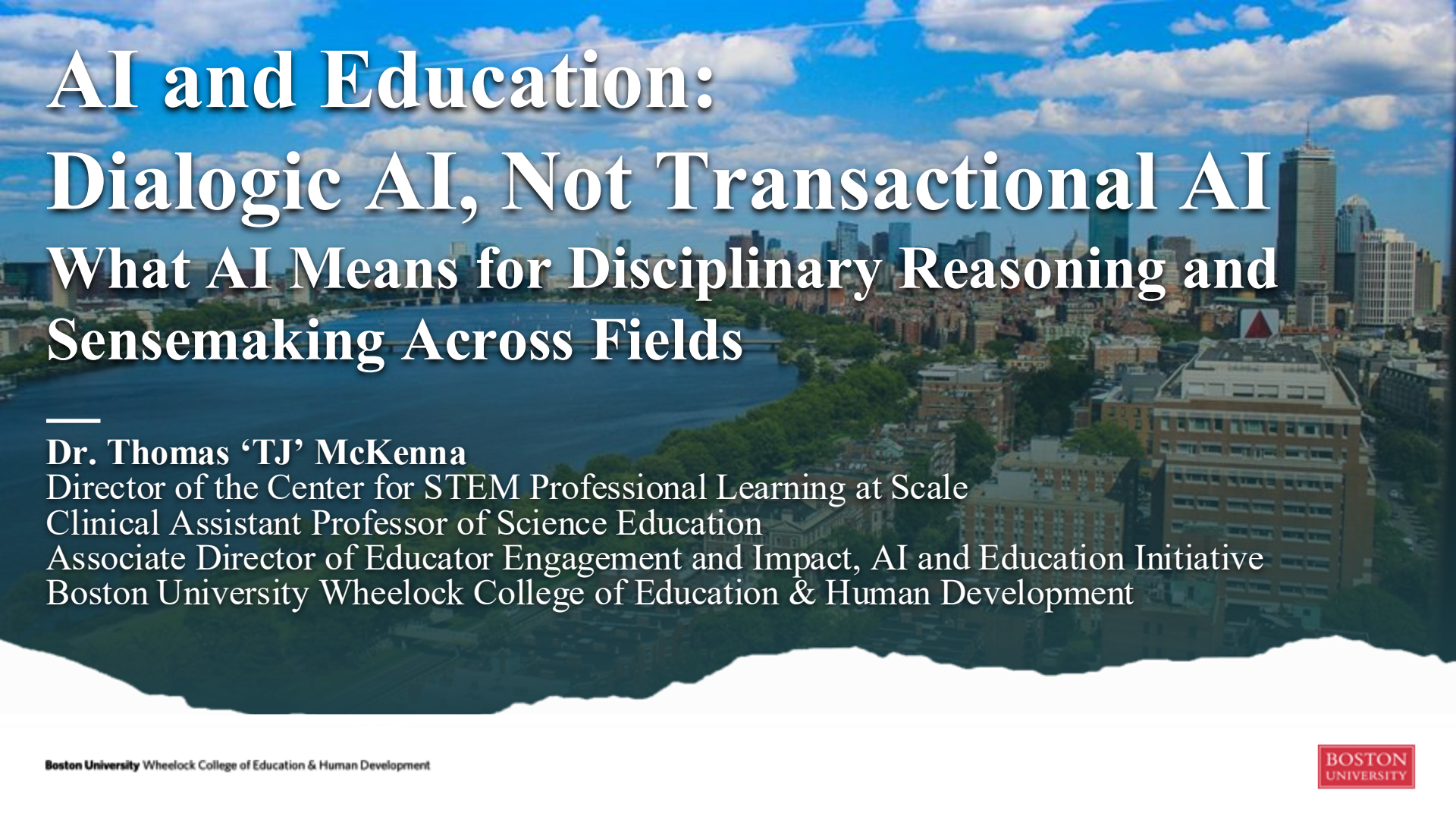
Connected TV/OTT self-serve ads



It's an era for growth mindset,
who can
learn,
unlearn,
and relearn → innovate.

Thank you for
Your time & attention!
Any Questions?



An aerial photograph of Boston, Massachusetts, showing the city skyline, the harbor, and the Charles River. The image is used as a background for the presentation slide.

AI and Education: Dialogic AI, Not Transactional AI What AI Means for Disciplinary Reasoning and Sensemaking Across Fields

Dr. Thomas ‘TJ’ McKenna

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Boston University Wheelock College of Education & Human Development

AI is like the student who always raises their hand and hasn't done any of the readings.

-Ethan Mollick, Wharton associate professor



What Educators Say About AI:

Educators see potential, but their concerns are epistemic, not technical

- Moderate familiarity, low system readiness
- Strong consensus on **human centrality**
- Concerns about **epistemic integrity and equity**
- High interest in **AI that supports disciplinary reasoning**
- **Limited confidence** communicating AI

So the question becomes: How can AI strengthen disciplinary reasoning rather than bypass it?



PreK-12 Classroom teachers, instructional coaches, district and school leaders, special educators, higher-education faculty, and curriculum specialists - together representing more than 720 combined years of experience in education.

AI-Mediated Coaching

Dialogic, not transactional

Engages in epistemic reasoning, not answer production.

Teacher agency by design

Socratic inquiry, not directive sequencing.

Pedagogically intentional architecture

Encodes disciplinary relationships.

Solves coaching scarcity

Coaching has an 0.49 effect size but only reaches 2% of teachers due to scarcity

The screenshot displays the 'NGSS AI Curriculum Coach' web application. At the top left is the 'NGSS Phenomena' logo. The main interface is divided into several sections. On the left, there's a 'Demo password' field with a placeholder 'Enter demo password' and a 'Memory ID (auto)' field with a 'New' button. To the right of these are fields for 'Grade' (set to 'All grades'), 'Unit (optional)' (with an example 'e.g., thermal energy'), and a 'Pinned context' section (currently 'No unit pinned') with a 'Select unit to pin' dropdown and 'Pin selected' and 'Rebuild index' buttons. Below these is a 'Search curriculum' section with a text input (example: 'e.g., modeling heat transfer') and a 'Search' button. A message below the search bar says 'No results yet. Try a topic or paste a phrase from your unit.' The middle section, 'Ideas from the curriculum', shows a sampling of DCIs, SEPs, and CCCs to spark brainstorming, with a grid of colored buttons representing various topics like 'ESS3 - Earth & human activity', 'Stability & change', 'Developing & Using Models', 'PS2 - Motion & stability', 'Structure & function', 'Constructing Explanations / Designing Solutions', 'LS4 - Biological evolution', 'Patterns', 'Analyzing & Interpreting Data', 'PS1 - Matter & interactions', 'Scale, proportion & quantity', and 'Using Mathematics & Computational Thinking'. At the bottom, there's a 'Curriculum conversations' sidebar with options like 'Sensemaking focus' (selected) and 'Assessment-first'. To the right of this is a 'Your instructional dilemma' section with a text input 'Describe what students did/said and what you want them to figure out...' and a 'Coach me' button.

187 NGSS-aligned curriculum PDFs indexed; 56,000–75,000 pages of content; 20–35 million words of curriculum text; 45,000–60,000 embedded chunks in FAISS; dozens of full NGSS units across upper elementary, middle, and high school; full NGSS taxonomy encoded (~60–70 DCIs, 8 SEPs, 7 CCCs); architecture integrates Instruct-or-XL embeddings, FAISS dense retrieval, and a pedagogically structured knowledge representation tuned for sensemaking and coaching.

AI can expand disciplinary sensemaking when framed intentionally

Supports analysis of disciplinary discourse

AI tools can surface **patterns** in classroom talk, written explanations, and model-based reasoning, allowing more precise interpretation of how learners **construct** ideas.

Expands representational resources

AI can generate **alternate explanations**, **analogies**, or **representations** that learners critique and refine, which strengthens **conceptual clarity**.

Augments reflection rather than replacing cognition

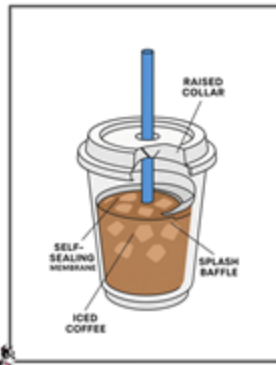
Structured prompts help learners **externalize reasoning**, compare perspectives, and revise models in ways that preserve the **cognitive substance** of learning.

Maintains the primacy of student and teacher judgment

AI supports **interpretive work** but does not displace the **relational or epistemic** dimensions of disciplinary reasoning and learning

Engineering Curious GPT: Dialogic Sensemaking Framework for Engineering Learners

Engineering Curious GPT				
By TJ McKenna, A				
What problems in your life could use an engineering solution?				
Dialogic Phase	GPT Pedagogical Function	Student Cognitive Action	Sensemaking Outcome	Theore Group
1. Elicit	Validates curiosity; frames problem context; normalizes uncertainty as a learning entry point.	Expresses confusion, curiosity, or a tentative hypothesis.	Epistemic openness: recognizing uncertainty as a productive state for inquiry.	Constructivist learning; agency.
2. Probe	Uses layered questioning (foundational, boundary, mechanistic, comparative, metacognitive) to deepen reasoning.	Articulates reasoning; examines causal and contextual relationships.	Causal and structural reasoning: linking principles to context.	Dialogic inquiry-based learning.
3. Explore	Encourages unpacking of tacit assumptions and iterative explanation.	Externalizes thought processes; surfaces and tests assumptions.	Cognitive visibility and refinement: exposing reasoning for adjustment.	Cognitive apprenticeship; reflection.
4. Synthesize	Introduces frameworks, analogies, or design heuristics to structure understanding.	Integrates new structures with prior reasoning; tests fit and coherence.	Conceptual coherence: unifying intuitive and formal knowledge.	Conceptual expertise; bridging.
5. Reflect	Prompts evaluation of understanding and confidence; supports metacognitive closure.	Evaluates learning progress; identifies next questions.	Metacognitive control and confidence calibration.	Metacognitive self-learning.



TJ's Engineering Curious ChatGPT	Normal ChatGPT
<p>...the most common problem is that the coffee is too hot to drink. This is a problem because it can cause burns and discomfort. The goal is to find a way to cool the coffee down without losing its flavor or making it taste worse.</p> <p>...the most common problem is that the coffee is too hot to drink. This is a problem because it can cause burns and discomfort. The goal is to find a way to cool the coffee down without losing its flavor or making it taste worse.</p>	<p>...the most common problem is that the coffee is too hot to drink. This is a problem because it can cause burns and discomfort. The goal is to find a way to cool the coffee down without losing its flavor or making it taste worse.</p> <p>...the most common problem is that the coffee is too hot to drink. This is a problem because it can cause burns and discomfort. The goal is to find a way to cool the coffee down without losing its flavor or making it taste worse.</p>



Sensemaking and the Future of Disciplinary Learning

- AI can expand **disciplinary perspectives**
- Reasoning becomes **hybrid** and **distributed**
- Knowledge-building shifts toward **disciplinary reasoning**
- Collective **disciplinary intelligence**
- A **pharmakon** moment



Thank You!

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This is what we are hoping to avoid with AI integration in schools



<https://www.ngssphenomena.com/>



Any questions?

UPCOMING EVENTS

AI Faculty In Studio Workshop

December 11, 2025

Event full, waitlist available

10 AM - 12 PM

January 15, 2026

Space currently available

10 AM - 12 PM

