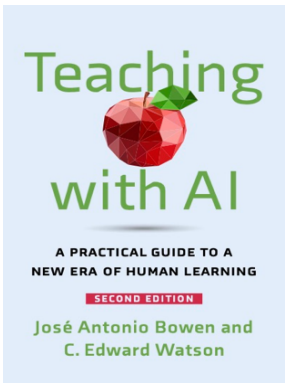
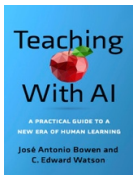
AI Strategy

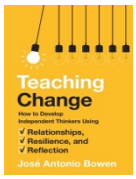
SLIDES, CITATIONS & RESOURCES

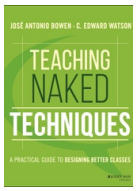
José Antonio Bowen

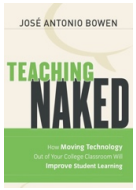
Discount code **HTAI25** will get you 30% off at JHUP for the 2nd Edition of Teaching with AI.











Organization of Topics:

What Can AI Really Do?
Searching for Ideas, Understanding Emotions, Customization
Deep Research, Agents, Expanding Perspectives, Simulations

Micro-Strategy
Building CLEAR Culture and Experimentation
Bias, New Work Flow, Enhanced Decision-Making

Macro-Strategy
Think Beyond Efficiency, What will AI change? When to invest?
New Competition, Real Strategy = Hard Choices

WORKING & THINKING

AI as the new AVERAGE

COMMUNICATION & RELATIONSHIPS

CREATIVITY

AI as LABOR

AI is Changing **WORKING** and **THINKING**

Previous tech changed how we work.

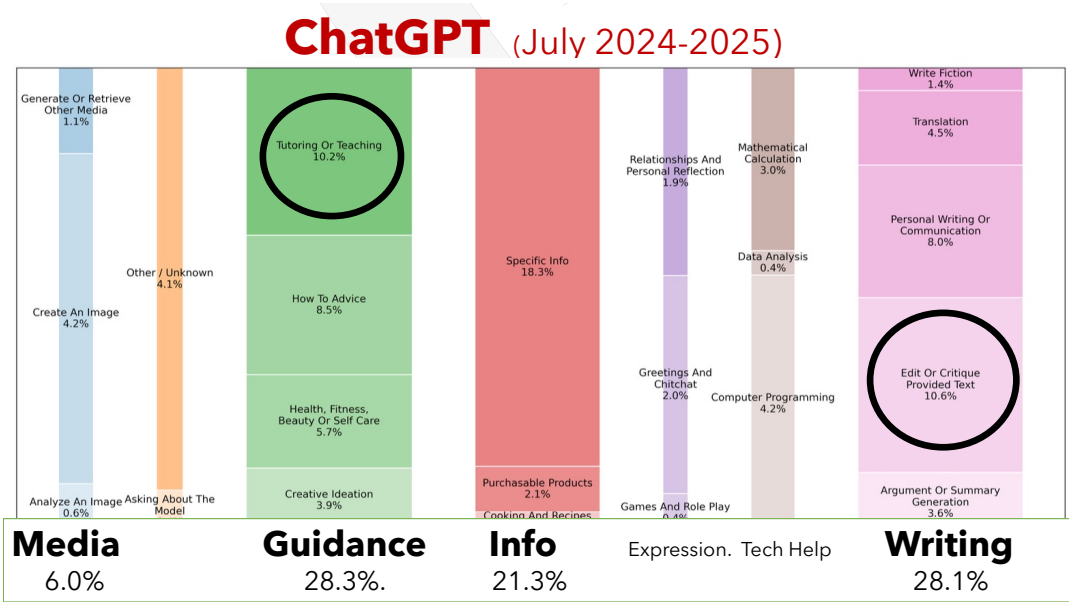
AI changes capability

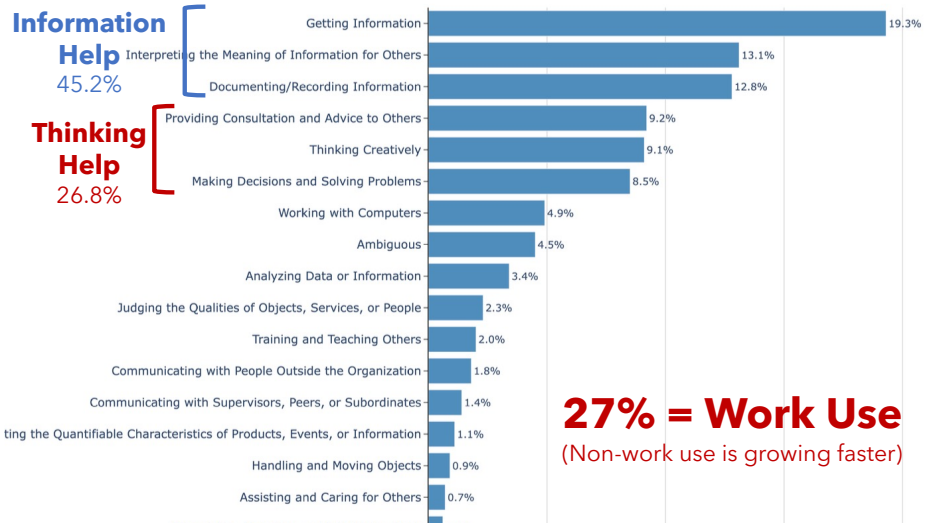
10% of Adults (700M) use ChatGPT Weekly

Growing **faster** in lower/middle income countries

52% = Women

10% = Teach me





27% = Work Use

(Non-work use is growing faster)

49% = Asking

40% = Doing

(56% of Work requests)

11% = Expressing

Chatterji, A., Cunningham, T., Deming, D. et al (2025, Sept), How People Use Chat GPT. NBER Working Paper 34255
http://www.nber.org/papers/w34255
Anthropic (2025, Sep 15). Anthropic Economic Index report: Uneven geographic and enterprise AI adoption
https://www.anthropic.com/research/anthropic-economic-index-september-2025-report

Public resistance to AI replacing jobs fades as AI capabilities improve

30% ok with AI replacing human jobs
58% when AI is described as outperforming humans at lower cost
Only **12%** of jobs (caregiving, therapy, and spiritual leadership) remain as morally off-limits.

A large-scale U.S. survey quota-matched to census demographics and assessing 940 occupations (*N* = 23,570 occupation ratings).
Friis, Simon and Riley, James W. and Friis, Simon, Performance or Principle: Resistance to Artificial Intelligence in the U.S. Labor Market (October 06, 2025). Harvard Business School Working Paper No. 26-017, Harvard Business School Organizational Behavior Unit Working Paper No. 26-017, Available at
SSRN: https://ssrn.com/abstract=5560401 or http://dx.doi.org/10.2139/ssrn.5560401

Better diagnosis and diagnostic reasoning "See the patient, not the technology" (Augmedix)

- Ardila, D., Kiraly, A.P., Bharadwaj, S. *et al.* End-to-end lung cancer screening with three-dimensional deep learning on low-dose chest computed tomography. *Nat Med* 25, 954–961 (2019). https://doi.org/10.1038/s41591-019-0447-x
- Breast-cancer screening gets a boost from AI. (2023). *Nature*, *620*(7974), 471. https://doi.org/10.1038/d41586-023-02526-4
- Suri, A., Tang, S., Kargilis, D. et al. (2023) Conquering the Cobb Angle: A Deep Learning Algorithm for Automated, Hardware-Invariant Measurement of Cobb Angle on Radiographs in Patients with Scoliosis *Radiology: Artificial Intelligence* 5:4
- Cabral S, Restrepo D, Kanjee Z, et al. Clinical Reasoning of a Generative Artificial Intelligence Model Compared With Physicians. *JAMA Intern Med.* Published online April 01, 2024. doi:10.1001/jamainternmed.2024.0295
- Articulate Medical Intelligence Explorer (AMIE), GOOGLE RESEARCH https://research.google/blog/amie-a-research-ai-system-for-diagnostic-medical-reasoning-and-conversations/?utm_source=substack&utm_medium=email
- Goh, E., Gallo, R et al (2024, March 14) Influence of a Large Language Model on Diagnostic Reasoning: A Randomized Clinical Vignette Study. medRxiv preprint doi: https://doi.org/10.1101/2024.03.12.24303785
- Everett, S. S., Bunning, B.J. Jain P., et al (2025, June 8) From Tool to Teammate: A Randomized Controlled Trial of Clinician-AI Collaborative Workflows for Diagnosis Preprint:
  medRxiv 2025.06.07.25329176; doi:https://doi.org/10.1101/2025.06.07.25329176

A specialized legal assistant "So you can do more of what AI can't." (CoCounsel)

- Schwarcz, Daniel and Manning, Sam and Barry, Patrick James and Cleveland, David R. and Prescott, J.J. and Rich, Beverly, AI-Powered Lawyering: AI Reasoning Models, Retrieval Augmented Generation, and the Future of Legal Practice (March 02, 2025). Minnesota Legal Studies Research Paper No. 25-16, https://ssrn.com/abstract=5162111
- Choi, Jonathan H. and Monahan, Amy and Schwarcz, Daniel, Lawyering in the Age of Artificial Intelligence (November 7, 2023). Minnesota Legal Studies Research Paper No. 23-31.
- Lauren Martin, Nick Whitehouse, Stephanie Yiu, Lizzie Catterson, Rivindu Perera (2024, Jan 24) Better Call GPT, Comparing Large Language Models Against Lawyers. ArXiv:2401.16212v1 https://arxiv.org/html/2401.16212v1

Better and faster bug fixes; Less Management and more focus on coding

- Nowakowski, J & Keller, J (2024, Jan) AI-powered patching: the future of automated vulnerability fixes. Google Security Engineering Technical Report.
- Hoffmann, Manuel and Boysel, Sam and Nagle, Frank and Peng, Sida and Xu, Kevin, Generative AI and the Nature of Work (October 27, 2024). Harvard Business School Strategy Unit Working Paper No. 25-021, Harvard Business Working Paper No. No. 25-021, http://dx.doi.org/10.2139/ssrn.5007084

Finding new antibiotics: "A paradigm shift in drug discovery"

- Swanson, K., Liu, G., Catacutan, D.B. *et al.* Generative AI for designing and validating easily synthesizable and structurally novel antibiotics. *Nat Mach Intell* **6**, 338–353 (2024). https://doi.org/10.1038/s42256-024-00809-7
- https://news.mit.edu/2020/artificial-intelligence-identifies-new-antibiotic-0220?utm_source=substack&utm_medium=email

AI can produce original research with higher acceptance rates

- "The AI Scientist" generates novel research ideas, writes code, executes experiments, visualizes results and describes its findings at a cost of $15 per paper. The code is open-sourced at https://github.com/SakanaAI/AI-Scientist Lu, C. Lu, C. et al (v3 Sep 1, 2024) The AI Scientist: Towards Fully Automated Open-Ended Scientific Discovery arXiv:2408.06292

Chicken deboning

- Poirer, E (2023). Ai Robotic Automation Key to Poultry Processing Evolution, Mechanical Engineering Magazine ASME https://www.asme.org/topics-resources/content/harnessing-ai-robotics-to-debone-chickens

Complicated Industrial Engineering Tasks

19 technicians completing 173 tasks with a troubleshooting RAG Bot
Results show that AI-assisted users significantly outperformed non-users in task performance.
The benefits were more substantial among less experienced technicians.
Performance gains were moderated by the AI attitudes and AI familiarity of technicians.
THERE IS A LEARNING CURVE

Löwhagen, N., Schwendener, P., & Netland, T. (2025). Can a troubleshooting AI assistant improve task performance in industrial contexts? *International Journal of Production Research*, 1–22. https://doi.org/10.1080/00207543.2025.2527368

Effective Therapist

THERABOT significantly greater reductions in symptoms (Dartmouth RCT study, N=210) treating clinical-level mental health symptoms

- major depressive disorder,
- generalized anxiety disorder
- clinically high risk for feeding and eating disorders

"Therabot was well utilized (average use >6 hours), and participants rated the therapeutic alliance as comparable to that of human therapists."

Heinz, M. V., Mackin, D. A. et al (2025, March 27) Randomized Trial of a Generative AI Chatbot for Mental Health Treatment, New England Journal of Medicina 2:4. https://ai.nejm.org/doi/full/10.1056/AIoa2400802

WHAT CAN AI REALLY DO?

Different AI models excel at different things. To learn more, open a fresh browser window and go to my website https://teachingnaked.com/models/

When you click on different tools, they will open in a new browser tab so you can compare.

ChatGPT Gemini Claude Grok LLaMA deepseek LATIMER sesame Sonus Qwen manus MINIMAX Genspark

teachingnaked.com/models

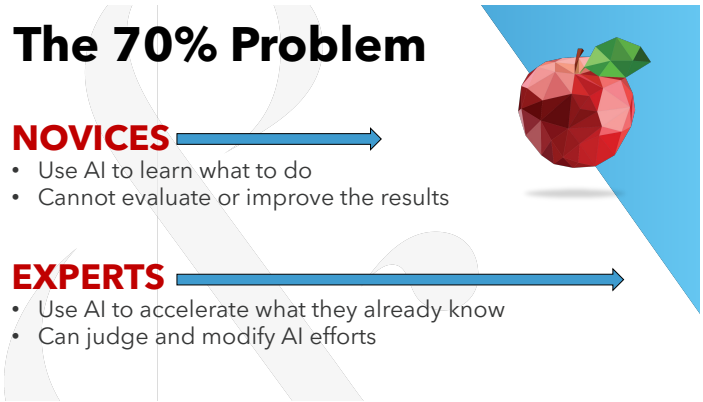
TRY BETTER PROMPTS

Try a more complicated and customized prompt in more than one model. You can copy and paste all prompts from my prompting page: https://teachingnaked.com/prompts/

Here are some examples. There are many more prompts to copy and paste on the webpage. Those prompts will NOT also be listed here.

- Provide 10 innovative ideas for how to introduce college students to topic X in class Y using examples or analogies they will find relevant.
- What might be unclear about these instructions to a college [year] at a [type] of university?
- How could I make this syllabus/assignment more inclusive? [upload a syllabus in Perplexity]
- Suggest a better title for this class/book/event that will attract [specific] students/audience.
- Can you put this into simpler terms for beginning students?
- Create a list of resources for a student at the University of X who is experiencing problem Y. Provide a verified link to each resource and three suggestions for how the student might use this resource.
- What are 10 innovative ways other faculty have taught this subject/class?

AI Improves Investment Decisions - FOR EXPERTS



AI usage WIDENS inequity between experts and novices

" When investors are given AI summaries aligned with their sophistication, they become better at processing financial information and making investment decisions. Conversely, misaligned summaries generally have an adverse effect, suggesting AI's ability to benefit investors hinges on personalization of information. We also show AI's benefits accrue disproportionately to individuals with higher financial expertise, which stems from an inherent tradeoff between accessibility for less sophisticated investors and technical precision used by more sophisticated investors. Together, our findings suggest AI improves performance on investment tasks, on average, but also underscore the potential for these tools to widen rather than limit existing performance gaps."

On AVERAGE, AI improved everyone's investing but experts gained more:

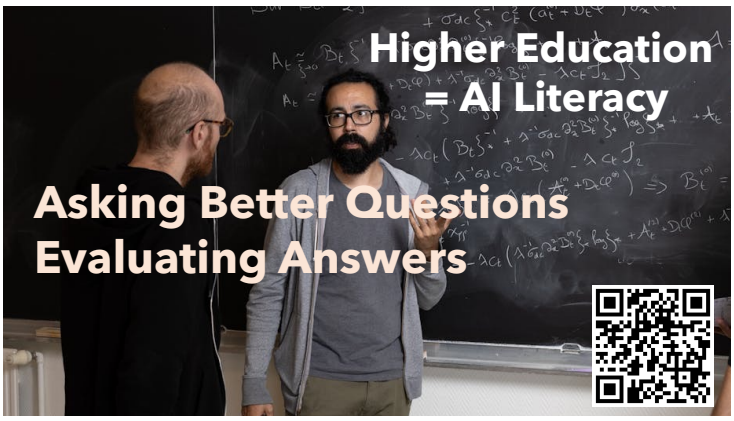
- Sophisticated investors = +9.6% improvements in 1-year returns
- Novice investors = +1.7% improvements in 1-year returns

The observation of 70% comes from a tweet by Peter Yang https://x.com/petergyang/status/1863058206752379255
Kim, Alex G. and Kim, David and Muhn, Maximilian and Nikolaev, Valeri V. and So, Eric C., AI, Investment Decisions, and Inequality (December 29, 2024). Chicago Booth Accounting Research Center Research Paper, Fama-Miller Working Paper, MIT Sloan Research Paper, Available at SSRN: https://ssrn.com/abstract=5075727 or http://dx.doi.org/10.2139/ssrn.5075727

AI usage NARROWS inequity between experts and novices

Humans working with AI do better solving math, science & ethics questions. And the high performers gain but the lower-performers gain more (a common finding) but being "good with AI" is key?!?

Riedl, C., & Weidmann, B. (2025, September 22). Quantifying Human-AI Synergy. https://doi.org/10.31234/osf.io/vbkmt_v1



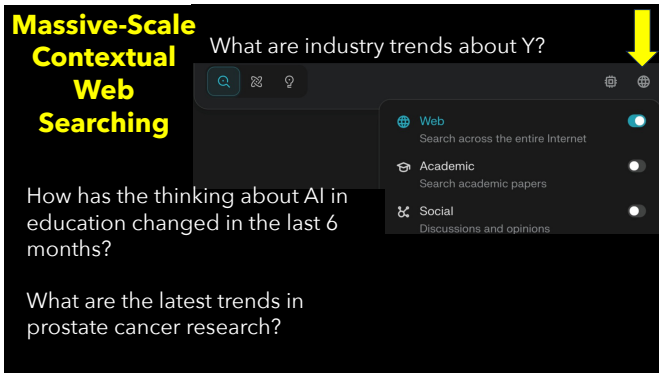
SEARCHING for IDEAS

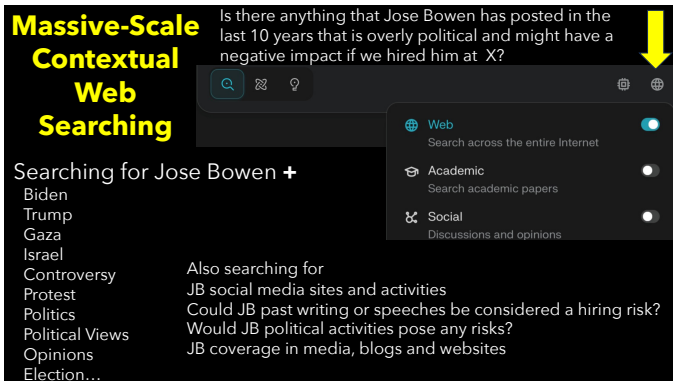
AI with Massive-Scale Contextual Web Searching

Google (used to) want to send you elsewhere, but AI wants to create content. Using AI to find information is often not the best use of AI, but most of the foundational models now allow you to ask for a web search as part of your answer (which, when paired with reasoning—see below, can be very useful). Google builds this into every search and also has AI mode

Many AI tools require you to click on an icon to enable search.

- Find anything **like this..**
- Has anything **similar** ever happened to a previous patient?
- What might be **missing** from this contract.
- Read our book and identify all of the places where we **repeated an idea**.
- Search for everything I need to know to prepare for an excellent job interview for position A at B and prepare a briefing document with talking points.





Search for candidates for our position X.

- Check CVs to make sure…
- Make a list with emails.
- Create a personalized email invitation to apply.
- Look especially for…

Reasoning Models

Reasoning models think through problems before answering. You need to use them a little differently: give it something hard to do and note (or ask) how it describes its reasoning. Look at this example. This is often NOT free and you need to select the "Deep Reseach" (Gemini) or other button. Since ChatGPT 5 also selects a model for, you may just need to add "think harder" to your prompt.

Contextual Search + Reasoning

Combining both search and reasoning buttons (Gemini has a single "Deep Research" button) gives you a powerful way to analyze and summarize things on the internet. Here are examples:

- YOU are a new customer/student
- GO to our web pages
- TEST them like a naive user hoping to…
- REPEAT for our competitors' sites
- ANALYSZE your findings in a brief report
- HIGHLIGHT the difficulties
- HOW might we make our website better?

Example:
You are a high school senior hoping to apply to college. Go to the University of X web page and test it like a naive user hoping to find out about majors and how to apply. Then go to ten other competitor universities and do the same thing. Collect your findings in a brief report that highlights the difficulties and how we might make using the University of X website better for new students.

- ANALYZE the new regulations around…
- SUMMARIZE the most important changes…
- SEARCH our web pages, courses and policies
- WRITE a report listing potential problems
- SUGGEST how we might remedy them
- CREATE an infographic based on this report
- USE our style guide and colors.

Example:
Analyze all of the new federal and state laws, executive orders and regulations around diversity, equity and inclusion (DEI) and provide a summary of the most important changes that might affect my unit/organization at [name organization]. Analyze all of our web pages, courses, policies and practices and create a report that lists all of the potential specific problems we might face and suggest how we might remedy them. Focus on the most volatile issues that might put us in the public spotlight or risk government funding. Create an infographic based on this report that will help our staff make sure we are in compliance with all new regulations. Use the X institution/university style guide and colors to make this infographic.

It is often better to do these in sequence rather than as one long prompt.

… Compare the costs of buying new attachments against the saving of buying a more expensive Dyson. Create a comparison table of the best options that includes

….The recommended vacuum needs to be available this month and in stock!

Deep Research (SEARCH + THINKING) -- TEMPLATE

All prompts and templates are also on www.teachingnaked.com/prompts

- Create a research report that will illuminate/examine/explore X. Make sure to examine the questions A, B, and C and include an analysis of D & E. You should begin with a critical review of literature/practice/web and then provide a synthesis of the key ideas/controversies/concepts/case studies and a recommendation.
- **Sources & Scope:** The research should
  - Draw from fields F & G,
  - Methodology H
  - Focus on peer-reviewed journal articles/best practices/reputable studies/institutional sources.
  - Look for sector/Western/political/educational/gender bias in sources
  - Seek global sources in language/culture I.
- **Purpose & Framework:**
  - Use K as a framework for understanding these issues.
  - Focus on real-world applications and capabilities.
  - Pay special attention to policy implications and government uses.
  - Note any potential for L.
- **Audience:**
  - Write for an audience of M/for journal N or submission to conference O.
  - Describe your findings with relevance to P.

AI is NOT like other tech

NOT predictable
NOT good at boring & repetitive taska
Both really good and really bad at some tasks.

AI Privacy is complicated

Ask these questions of your bank, shopping, car, search engine and LMS
At https://privacy.commonsense.org

- Personal information is sold or rented to third parties.
- Personal information is shared for third-party marketing.
- Data are collected by third-parties for their own purposes.
- User's info used to track & target advertisements on third-party websites or services.
- Data profiles are created and used for personalized advertisements.

A lot of your data was already used to train AI models.

AI does not know or store anything. AI retains only the weights.

There is some good new then in the way this bizarre technology works.

If you do not want companies to use your data for training the NEXT LLM (the current one is already trained) you should adjust your setting in your account. BUT it is not possible for someone else (or you) to extract the texts you have uploaded to an AI. It is not like the MS and Google docs that are saved as files—which were probably used already to train the model…

Agents

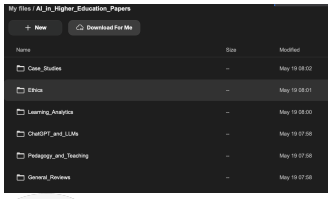
A chatbot can only chat with you, but an "agent" can plan and execute a series of tasks, like building you website, making a reservation, creating a slide deck, or exploring you task lists, email and workflow, then c or finding information on your computer. Here is a demo (from Graham Clay) where Operator has been asked to write an essay in a GoogleDoc at human speed with edits.

I think Genspark.ai and Manus.im are still the two best, although ChatGPT 5 can do some of the same things (but often less well.) More on the website.

Research Example:

Research and find all of the academic papers on AI in Education in the last year and then find pdfs of every paper you can and download them into organized files.

- Massive Multi-Contextual Search
- Find pdf
- Download pdfs
- Organize
- Create a link to the files




Journal of Theoretical and Applied Information Technology

AI-DRIVEN CHATBOT IMPLEMENTATION FOR ENHANCING CUSTOMER SERVICE IN HIGHER EDUCATION: A CASE STUDY FROM UNIVERSITAS NEGERI SEMARANG

MUHAMAD ANBIYA NUR ISLAM[1], BUDI WARSITO[2], OKY DWI NURHAYATI[3]

Creating a playable simulation on a website.

Genspark vs ChatGPT5

Create and deploy an interactive superhero-themed game to teach the Bingham plastic model through visual simulation to college students in both English and Arabic.

Got it – I'll deliver the game in **Arabic + English**, packaged as a **standalone web app** you can open in your browser or run locally without installing anything complicated.

You can click here to play the game: https://josebowen.github.io/BinghamGame/

Here is ChatGPT version
https://josebowen.github.io/Bingham-Hero/

SYSTEM PROMPTS

A system prompt is a general reusable prompt that you can used to control the actions or behavior of your AI on regular basis.

Most AI systems now allow you to add a system prompt to your profile so it is always active. You can also switch between different system prompts for different needs. (You might want the tone of research and teaching materials to be different._

Here is a sample:

- Be aggressive in surfacing my assumptions
- Think globally: be vigilant about Western, gender, racial and other bias.
- Focus on accuracy. Check all of your sources and show citations, links and references. Always search in a variety of languages. Doublecheck everything.
- Evaluate all information. Provide a probability score for facts and data that let me know your confidence level in the accuracy of the information.
- Help me find unique insights and create new ideas. Provide alternative explanations and push me to think differently.

You can find more examples at https://teachingnaked.com/system-prompts/

API Research Assistants

"We find that productivity among GenAI users rose by 15 percent in 2023 relative to non-users and further increased to 36 percent in 2024, consistent with a cumulative effect as users became more experienced with the technology and with a publication lag in the appearance of papers written using GenAI tools. The estimated improvements in journal quality are smaller but still positive, with mean impact factors rising by 1.3 percent in 2023 and 2.0 percent in 2024. These findings suggest that while GenAI primarily facilitates higher research output, it may also contribute to incremental improvements in where papers are published" (p. 14)

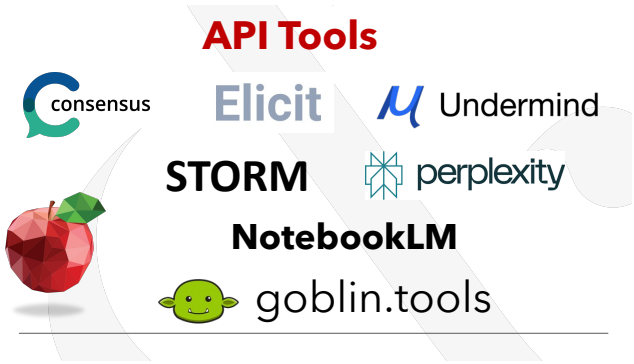
Filimonović, D., Rutzer, C., & Wunsch, C. (2025, Oct). Can GenAI Improve Academic Performance? Evidence from the Social and Behavioral Sciences. https://arxiv.org/abs/2510.02408

Application Program Interface (API) tools are like apps on your phone: they are designed for specific tasks.

There is a long list of curated AI models and API tolls at https://teachingnaked.com/models/

Here are very few API cool tools you should try

To me, **Undermind** is the best academic literature search tool. It is tilted a little to hard sciences, but try it first.



FutureHouse is really a tool for scientists with a variety of search tools including Owl, which does a precedent search)useful for finding a dissertation topic say.)

Consensus.app is an academic research tool that limits its data search to the 200M published papers in Semantic Scholar and uses AI (ChatGPT).

Elicit has a deeper "Research Report" tool that allows you to control every step. It pulls sources but lets you check this and add or subtract. It also allows you to chat with your report.

Mike Caulfied has produced a fabulous AI search-research-claims checking tool based on his well-know **SIFT methodology** for digital literacy and he has written a long (and FREE) prompt that will turn your LLM into an insightful useful research and thinking assistant. This is an essential tool—and it demonstrated: https://mikecaulfield.substack.com/p/using-unfolding-search-heuristics?utm_source=post-email-title&publication_id=359066&post_id=164373831

Storm (short for brainstorm) is a new research tool from Stanford that creates a Wikipedia-like report on the topic of your choice.

Perplexity.ai remains very useful as AI-powered chatbot search engine. It allows you to chose both your model and what type of search you want (web, academic, or social media)

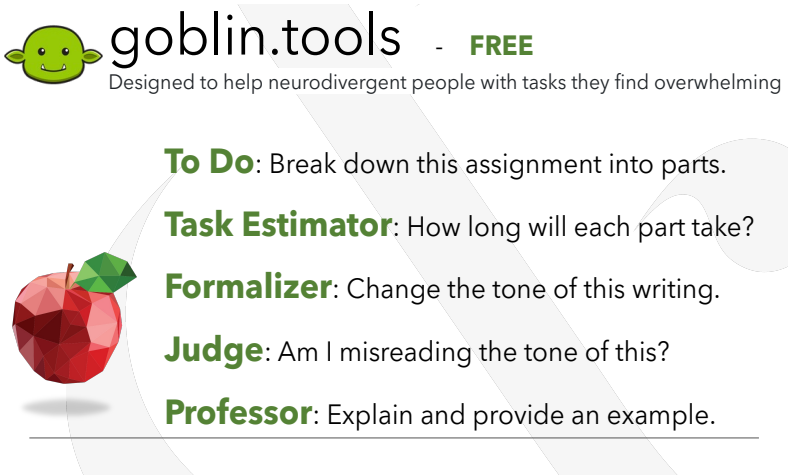
Working with YOUR data:

NotebookLM is Googles version of a research assistant but it works only on the documents (up to 50) you upload (up to 500,000 words EACH). Some possible uses:

1. Create study or review questions
2. A course guide for students
3. A course guide for you, TAs or adjuncts
4. A notebook for tenure or teaching
5. A research assistant

Try uploading a book and asking for a study guide or an interactive podcast.
Here is an AI-created podcast about the first part of my Teaching Change book.

- Mem has similar features that allow you to "chat with your data."
- Nomic Atlas and Julius both allow you to do computations and visualizations with your data. Julius also writes reports, finds insights and does analysis.



Jasper Roe (2025). How to Use Generative AI in Educational Research. Cambridge University Press.
Series: Elements in Research Methods in Education DOI: https://doi.org/

COMMUNICATION and RELATIONSHIPS

"See the patient, not the technology" (Augmedix)

AI is more persuasive

87% More Likely to Change your Mind

- Salvi, F, Ribeiro, M. H., Gallotti, R., West, R. (2024). On the Conversational Persuasiveness of Large Language Models: A Randomized Controlled Trial. arXiv:2403.14380v1 https://doi.org/10.48550/arXiv.2403.14380
- Anthropic (2024, April 9). Measuring the Persuasiveness of Language Models https://www.anthropic.com/research/measuring-model-persuasiveness
- Schoenegger, P., Salvi F. et al (2025, May 14) Large Language Models Are More Persuasive Than Incentivized Human Persuaders. arXiv:2505.09662

Greater Reduction in Conspiracy Beliefs

- Costello, T. H., Pennycook, G., & Rand, D. G. (2024, April 3). Durably reducing conspiracy beliefs through dialogues with AI. https://doi.org/10.31234/osf.io/xcwdn
- Costello, T. H., Pennycook, G., & Rand, D. G. (2025, February 17). Just the facts: How dialogues with AI reduce conspiracy beliefs. https://doi.org/10.31234/osf.io/h7n8u_v1
- https://www.debunkbot.com/

More persuasive BECAUSE it deploys FACTS faster, more strategically and with more accuracy than humans

- Hackenburg, K., Tappin, B.M. et al. The Levers of Political Persuasion with Conversational AI (2025, Jul 18). arXiv:2507.13919

And Better at Reframing Emotional Situations

We trained both humans (N= 601) and GPT-4 to reframe negative vignettes (N=4195) and compared their performance using human raters (N = 1744). GPT-4 outperformed humans on 3 of the 4 examined metrics."

- Li, J. Z., Herderich, A., & Goldenberg, A. (2024, April 19). Skill but not Effort Drive GPT Overperformance over Humans in Cognitive Reframing of Negative Scenarios. https://doi.org/10.31234/osf.io/fzvd8

And Better on Emotional Intelligence Tests

- Schlegel, K., Sommer, N.R. & Mortillaro, M. Large language models are proficient in solving and creating emotional intelligence tests. *Commun Psychol* **3**, 80 (2025). https://doi.org/10.1038/s44271-025-00258-x

Voice AI is better at recruiting and hiring

70,000 applicants in the Philippines, an LLM voice recruiter beat human recruiters in hiring customer service reps, with 12% more offers, 18% more starts, 17% higher 1-month retention and less gender discrimination.

- Jabarian, Brian and Henkel, Luca, Voice AI in Firms: A Natural Field Experiment on Automated Job Interviews (August 18, 2025). http://dx.doi.org/10.2139/ssrn.5395709

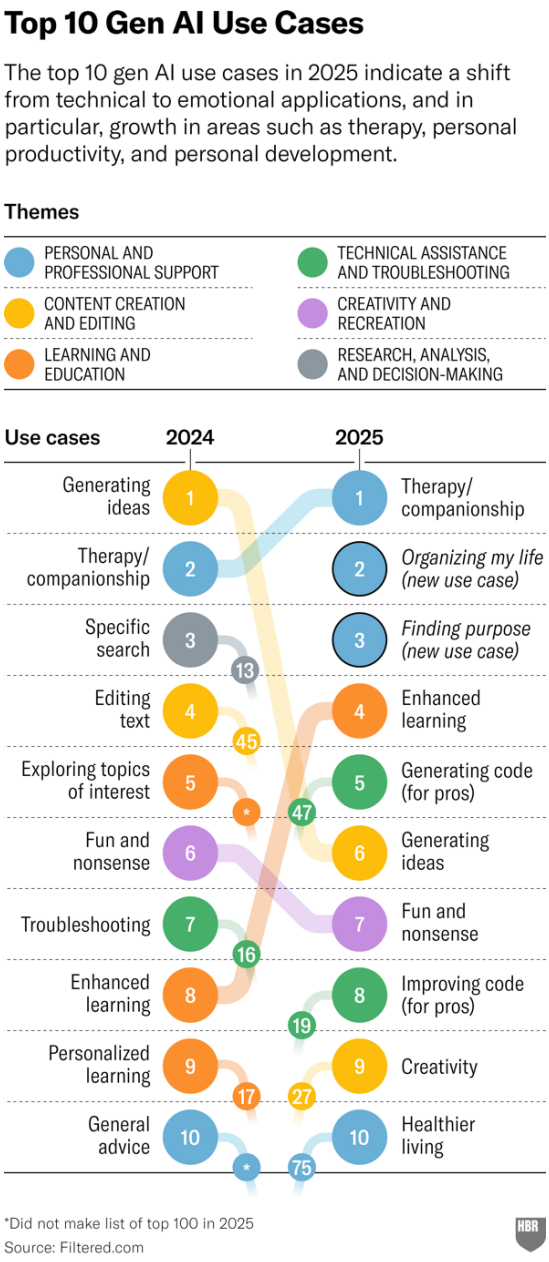
We are moving from Technical Use to

Emotional Use

Zao-Sanders, M. (2025, April 9). How People Are Really Using Gen AI in 2025. Harvard Business Review https://hbr.org/2025/04/how-people-are-really-using-gen-ai-in-2025

American singles open to "dating" an AI?
72% of men
51% of women

- Customize the perfect partner
- Can't Cheat
- No typical relationship Problems
- More Emotionally Attuned



Blackbyrn, S. C. N. G. (2025, Jan) Would You Fall In Love With An AI – 3 In 5 AMERICANS SAY YES Coach Foundation Survey https://coachfoundation.com/blog/ai-love-survey/

EXPAND PERSPECTIVES

Focus Groups, Surveys, Feedback, Interviews, Empathy & Treatment Effects

AI can replicate social science experiments with high accuracy (r=0.85)
DEMO: https://www.treatmenteffect.app/
Ashokkumar, A., Hewitt, L et al (Aug 2024) *Prediction of Social Science Experimental Results Using Large Language Models*
Stanford and Google's DeepMind create 1000 replicas from interviews. 85% as accurate on the General Social Survey as the participants themselves.
Park, J. S. Zou, C. Q et al (2024). Generative Agent Simulations of 1000 People. Arxiv https://arxiv.org/pdf/2411.10109

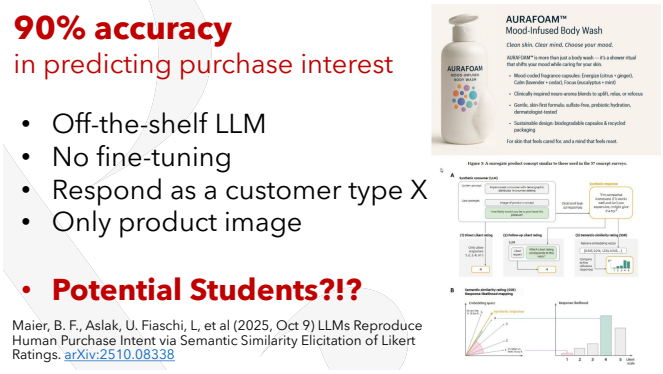
Sample Prompts:

- I am trying to gain a richer understanding of why students might be struggling with problem X. You will help by responding as a honest first-year/first gen/minority/non-major student to help deepen my knowledge. Question my assumptions when necessary and tell me stories to build my empathy for the real causes of this problem.

Emotionally Intelligent AI

Try sesame.ai or hume.ai
Voice to voice emotional intelligence

AI will mimic your tone
Let's have a robust debate about X.
Be persuasive but kind as we discuss X.
I would like to analyze X with you.



Maier, B. F., Aslak, U. Fiaschi, L, et al (2025, Oct 9) LLMs Reproduce Human Purchase Intent via Semantic Similarity Elicitation of Likert Ratings. arXiv:2510.08338

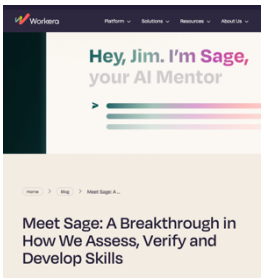
AI at the Career Center: Cover Letters, Resumes, Interviews, Mentors!?

https://www.biginterview.com/

@ Texas Christian U "Use Big Interview to learn and practice your interview skills for jobs or graduate school. Big Interview also helps students and alumni prepare for video/virtual and automated interviews. All TCU students and alumni may access this resource for no cost."

https://careers.tcu.edu/students/career-tools/interview-preparation/
https://interactiveeq.com/
https://careerservices.fas.harvard.edu/channels/ai-for-professional-development-and-exploration/

AI Tools Reshape Job Application Process: Interview with Carnegie Mellon University Director of Employer Relations Sean McGowan
https://www.cmu.edu/news/stories/archives/2024/june/ai-tools-reshape-job-application-process
Google Career Dreamer Tool
https://grow.google/career-dreamer/home



Sage from Workera
Aceup AI

For more: https://www.marketplace.org/2024/09/30/generative-ai-artificial-intelligence-soft-skills/

AI at WORK = WHICH TASKS?

AI is like working with 1000s of Naïve Interns
NOT a person, but ACTS like one

START WITH STUFF YOU KNOW

EVERY job is going to change

- **100%** of jobs have at least one task that AI can do better TODAY

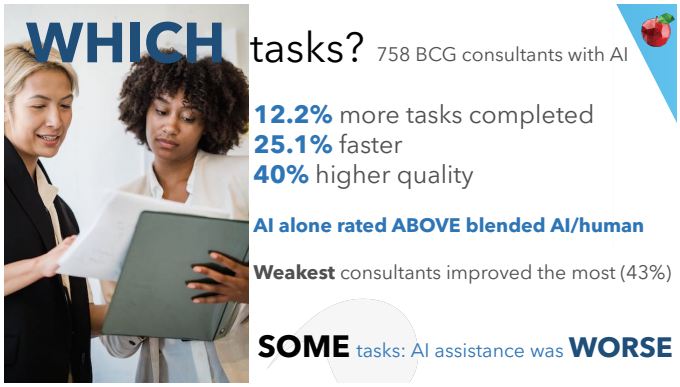
Maslej, N.,Fattorini, L., Brynjolfsson, E., Etchemendy, J., et al. (2023, April). The AI Index 2023 Annual Report, AI Index Steering Committee, Institute for Human-Centered AI, Stanford University. All 950 jobs listed by the US Department of Labor

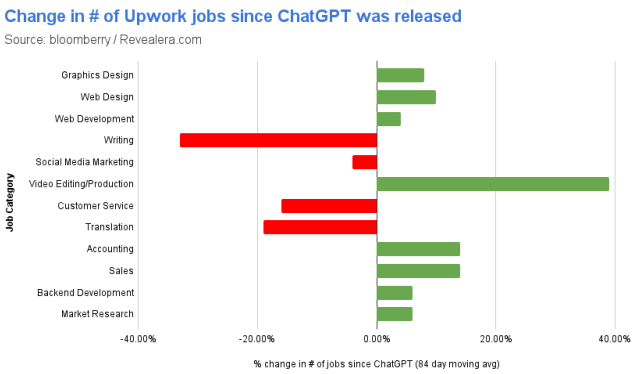
- **80%** of the U.S. workers could have **10%** of tasks affected by AI
- **19%** of workers may see at least **50%** of tasks affected by AI

Eloundou, T., Manning, S., Mishkin, P. & Rock, D. (2023, March.) GPTs are GPTs: An Early Look at the Labor Market Impact Potential of Large Language Models, Papers 2303.10130, arXiv.org.

A study of 263 physicians and advance practice practitioners across 6 health care systems found that after 30 days with an ambient AI scribe, burnout among those working in ambulatory clinics decreased significantly from 51.9% to 38.8%. There were also significant improvements in the cognitive task load, time spent documenting after hours, focused attention on patients, and urgent access to care.

Olson KD, Meeker D, Troup M, et al. Use of Ambient AI Scribes to Reduce Administrative Burden and Professional Burnout. *JAMA Netw Open.* 2025;8(10):e2534976. doi:10.1001/jamanetworkopen.2025.34976





Dell'Acqua, McFowland, Mollick, et al (2023, Sep 15). Navigating the Jagged Technological Frontier: Field Experimental Evidence of the Effects of AI on Knowledge Worker Productivity and Quality (September 15, 2023). Harvard Business School Technology & Operations Mgt. Unit Working Paper No. 24-013

https://www.linkedin.com/pulse/what-jobs-being-replaced-ai-gs-kumar-aycqc/

Demirici, O., Hannane, J. & Zhu, X. (2024, Nov 11) How Gen AI Is Already Impacting the Labor Market. Harvard Business Review.

Journalists and AI

https://www.cjr.org/feature-2/how-were-using-ai-tech-gina-chua-nicholas-thompson-emilia-david-zach-seward-millie-tran.php
https://www.niemanlab.org/2024/05/for-the-first-time-two-pulitzer-winners-disclosed-using-ai-in-their-reporting/

- Den Houter K. (2024, Oct 8) AI in the Workplace: Answering 3 Big Questions, Gallup https://www.gallup.com/workplace/651203/workplace-answering-big-questions.aspx?utm_source=substack&utm_medium=email
- Bick, A, Blandin, A. Deming, D. J. (2024, Sep 18). The Rapid Adoption of Generative AI, NBER Working Paper 32966 http://www.nber.org/papers/w32966
- Humlum, A. Vertergaard, E. (2024, April 24) The Adoption of ChatGPT. *BFI Working Paper No. 2024-50* *https://bfi.uchicago.edu/insights/the-adoption-of-chatgpt/?utm_source=substack&utm*
- McKinsey Insights

ADVISING is a combination of
Administrative Tasks (monitor data, check degree progress, finding courses, release to register)
MENTORING and RELATIONSHIPS

Are there tasks where AI can do SOME of the work?
??Drafts of

- Study Guides
- Rubrics
- Test Questions
- Reference Letters
- Reports & Proposals

JOB LOSS for entry-level jobs

Brynjolfssohn, E., Chandar, B., & Chen, R. (2025, Aug 26. Canaries in the Coal Mine? Six Facts about the Recent Employment Effects of Artificial Intelligence.
https://digitaleconomy.stanford.edu/publications/canaries-in-the-coal-mine/

Martin. M., (2025, May 27). Educated but unemployed, a rising reality for college grads. Oxford Economics Research Briefing. https://www.oxfordeconomics.com/wp-content/uploads/2025/05/US-Educated-but-unemployed-a-rising-reality-for-college-grads.pdf
https://www.oxfordeconomics.com/resource/educated-but-unemployed-a-rising-reality-for-us-college-grads/

Lichtinger, Guy and Hosseini Maasoum, Seyed Mahdi and Hosseini Maasoum, Seyed Mahdi, Generative AI as Seniority-Biased Technological Change: Evidence from U.S. Résumé and Job Posting Data (August 31, 2025).
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5425555

PROMPTING IS WRITING

PRECISE & CLEAR LANGUAGE MATTERS

ITERATION/DIALOGUE EXERCISE

Create a paragraph/syllabus/assignment...
Write two <u>different</u> opening paragraphs about... [CHOOSE A SUBJECT YOU KNOW!]

NOW MAKE THE RESPONSE BETTER:

- Write in style A as if were [person/position].
- Respond like an expert in X with experience Y.
- Design for an audience Z.
- Hook the reader with something more unexpected.
- Be more persuasive but witty.

Try a different AI

PROMPTING VARYS by AI: Context and Examples help

- Meincke, L. and Mollick, E. R. and Terwiesch, C. (2024, Jan 27). Prompting Diverse Ideas: Increasing AI Idea Variance http://dx.doi.org/10.2139/ssrn.4708466
- Woolf, M. (2024, Feb 23) Does Offering ChatGPT a Tip Cause it to Generate Better Text? An Analysis. Max Woolf's Blog https://minimaxir.com/2024/02/chatgpt-tips-analysis/
- Ziqi Yin, Wang, H., Horio, K et al (2024, Feb) Should We Respect LLMs? A Cross-Lingual Study on the Influence of Prompt Politeness on LLM Performance a arXiv'24 https://arxiv.org/pdf/2402.14531

Iterate

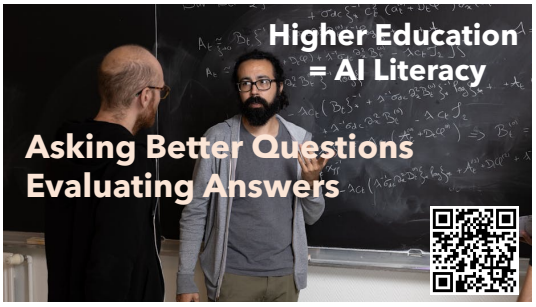
Start with what you know

Small changes make a difference

Prompting is weird, BUT

PROMPTING IS WRITING

Clear and Precise Communication Matters Most



AI is a new form of **LABOR**

Everyone is now an AI boss.

AI is Changing AVERAGE

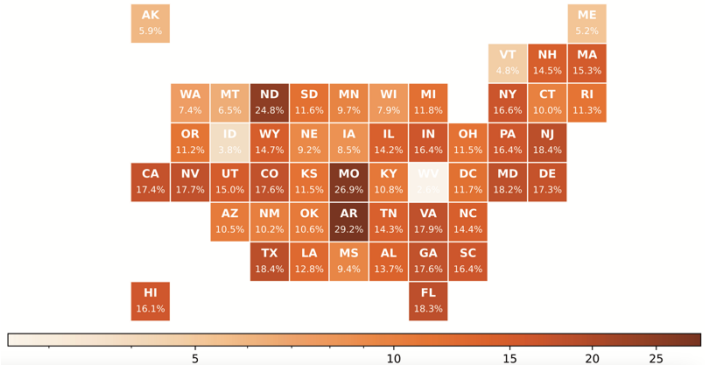
Is AI the Fastest Change in Human Writing?

AI-Assistance in Writing is widespread

- **18%** of financial consumer complaints
- **24%** of corporate press releases
- **15%** of job postings
- **14%** of UN press releases

- Arkansas **30%**
- Missouri at **26.9%**
- North Dakota **24.8%**

- California **17.4%**
- New York **16.6%**
- Connecticut **10%**



This Stanford-led group examined writing samples from January 2022 to September 2024:

687,241 consumer complaints submitted to the US Consumer Financial Protection Bureau 537,413 corporate press releases

304.3 million job postings, and

15,919 United Nations press releases.

Liang, W., Zhang, Y. et al (2025, Feb 17). The Widespread Adoption of Large Language Model-Assisted Writing Across Society, arXiv: 2502.09747 https://arxiv.org/abs/2502.09747

AI is Changing CUSTOMIZATION

You can now create unique and custom songs with Suno, Udio and Riffusion.

What about walk on music for you or your course?

https://www.youtube.com/watch?v=_I5XmXV-RX8

What about a custom bedtime story for your children?

You can do this using the voice feature in many models (including ChatGPT) but try Hume AI

If you want a custom story read in your own voice, try Cartesia

Try customizing an assignment sheet or problem set for every individual student in your class

AI is the new C Grade

AI Detection Key Points

1. Faculty cannot detect AI use

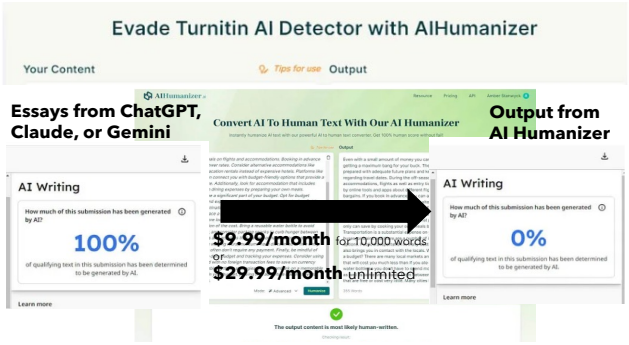
- The best AI detectors are better at identifying AI writing than faculty and can mostly separate human from AI writing, but do make mistakes.
- GPT-4 writing is judged to be MORE human by both humans and GPT-4 detectors
- Blind study finds 94% of AI submissions were undetected

Scarfe P, Watcham K, Clarke A, Roesch E (2024) A real-world test of artificial intelligence infiltration of a university examinations system: A "Turing Test" case study. PLoS ONE 19(6): e0305354. https://doi.org/10.1371/journal.pone.0305354

Rathi, Ishika & Taylor, Sydney & Bergen, Benjamin & Jones, Cameron. (2024). GPT-4 is judged more human than humans in displaced and inverted Turing tests. https://arxiv.org/abs/2407.08853

2. The accuracy of AI detectors varies considerably.

3. Strategies can decrease the accuracy of detectors, including paid bypass systems.



Weber-Wulff, D., Anohina-Naumeca, A., Bjelobaba, S., Foltýnek, T., Guerrero-Dib, J., Popoola, O., Šigut, P., & Waddington, L. (2023). *Testing of detection tools for AI-generated text.* arXivLabs. https://doi.org/10.48550/arXiv.2306.15666

Perkins, M., Roe, J., Postma, D., McGaughran, J., & Hickerson, D. (2023). Detection of GPT-4 generated text in higher education: Combining academic judgement and software to identify generative AI tool misuse. *Journal of Academic Ethics*. https://doi.org/10.1007/s10805-023-09492-6

Derek Newton, The Cheat Sheet https://thecheatsheet.substack.com/

Perkins, M., Roe, J., Vu, B.H. *et al.* Simple techniques to bypass GenAI text detectors: implications for inclusive education. *Int J Educ Technol High Educ* 21, 53 (2024). https://doi.org/10.1186/s41239-024-00487-w

4. Detectors do NOT tell you how much AI was used or how it was used.

- "Detectors frequently flag even minimally polished text as AI-generated, struggle to differentiate between degrees of AI involvement, and exhibit biases against older and smaller models."
- "[M]inimal polishing with GPT-4o can lead to detection rates ranging from 10% to 75%, depending on the detector."
- Is it cheating if a student writes a text and gets AI refinements? How many refinements?
- What about a human written text that used AI-ideas?

Saha, S. & Feizi, S. (2025, May 5). Almost AI, Almost Human: The Challenge of Detecting AI-Polished Writing. arXiv: 2502.1566v2. https://arxiv.org/pdf/2502.15666

Detectors do NOT give you proof.

At best, detectors provide a probability score. That will not hold up in court.

AI detectors do not accuse students of cheating.

You do, so legally, you have better be ready with proof.

It is not plagiarism.

Plagiarism requires an author from which you copy. Every time you prompt an AI you get a different and unique answer, so you cannot demonstrate an original that was plagiarized.

The US Copyright Office has ruled
"…the outputs of generative AI can be protected by copyright only where a human author has determined sufficient expressive elements."

You can read the full Report (from Jan 29, 2025) on Copyright and Artificial Intelligence here: https://www.copyright.gov/ai/

Even Turnitin found that the vast majority of student papers had little or no AI.

Few students are still just copy and pasting
Turnitin say 6 Million papers (3% of 200M) had 80% or more AI from April 2023-2024
https://www.prnewswire.com/in/news-releases/turnitin-marks-one-year-anniversary-of-its-ai-writing-detector-with-millions-of-papers-reviewed-globally-302111764.html?utm_source=substack&utm_medium=email

This is an arms race you won't win.

Cheating, especially with AI, is now a huge business.

Move the discussion from policing to learning

It's not Plagiarism, so what do we call this?

Cheating?	Intent to gain advantage
Overreliance?	Excessive dependance
	Undermines educational purpose
Misuse?	Inappropriate use
	Failure to disclose
Fraud?	Deliberate misrepresentation

JOB-LOSS

What we call cheating, business calls progress.

1 in 3 Fortune 500 companies use Grammarly

Why would anyone hire a C student if AI can do C work?
Can we articulate what our graduates will do that AI cannot?

Entry-level JOBS for college grads are harder to find

"…early-career workers (ages 22-25) in the most AI-exposed occupations have experienced a **13%** relative decline in employment even after controlling for firm-level shocks. In contrast, employment for workers in less exposed fields and more experienced workers in the same occupations has remained stable or continued to grow. We also find that adjustments occur primarily through employment rather than compensation. Furthermore, employment declines are concentrated in occupations where AI is more likely to automate, rather than augment, human labor."

Brynjolfssohn, E., Chandar, B., & Chen, R. (2025, Aug 26. Canaries in the Coal Mine? Six Facts about the Recent Employment Effects of Artificial Intelligence.
https://digitaleconomy.stanford.edu/publications/canaries-in-the-coal-mine/

Martin. M., (2025, May 27). Educated but unemployed, a rising reality for college grads. Oxford Economics Research Briefing. https://www.oxfordeconomics.com/wp-content/uploads/2025/05/US-Educated-but-unemployed-a-rising-reality-for-college-grads.pdf
https://www.oxfordeconomics.com/resource/educated-but-unemployed-a-rising-reality-for-us-college-grads/

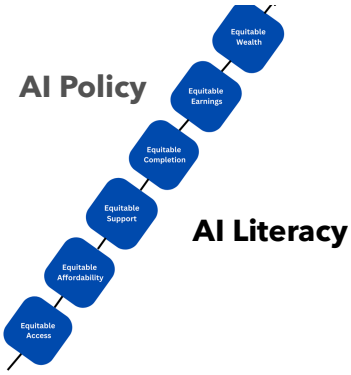
Lichtinger, Guy and Hosseini Maasoum, Seyed Mahdi and Hosseini Maasoum, Seyed Mahdi, Generative AI as Seniority-Biased Technological Change: Evidence from U.S. Résumé and Job Posting Data (August 31, 2025).
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5425555

66% of leaders say they wouldn't hire someone without AI skills
https://www.microsoft.com/en-us/worklab/work-trend-index/ai-at-work-is-here-now-comes-the-hard-part

Raise Standards: What More Can Humans Do?

Create an imaginative music video to the song Welcome to the Machine by Pink Floyd
Pink Floyd AI Music VIDEO: https://www.youtube.com/watch?v=9Gnu9u2Owms

AI POLICIES



Why Policy?

1. More students will use AI if they have motive, means, and opportunity.
2. AI detection is hardly foolproof.
3. Even a small number of false positives can be harmful.
4. Students don't think about the goals of college the way faculty do.
5. Integrity extends beyond academia but needs to be explicit.
6. Students don't know high quality, unless you teach them this independently.

Students are twice as likely (47% of students vs. 22% of faculty) to say using AI has a positive impact on learning, but will they learn more or just become dependent?

Shaw, C., Yuan, L., Brennan, D., Martin, S., Janson, N., Fox, K., & Bryant, G. (2023, October 23). Tyton Partners. tytonpartners.com/time-for-class-2023/GenAI-Update

Darvishi, A., Khosravi, H., Sadiq, S., Gašević, D., & Siemens, G. (2024). Impact of AI assistance on student agency. Computers & Education, 210, 104967. https://doi.org/10.1016/j.compedu.2023.104967

The MLA Task Force on Writing and AI has suggested a tiered approach with guided principles at each level: a very broad tier for institution (that connects to other academic integrity policies) with additional guidance at the program or the department and final level for the syllabus. The middle level is the hardest and requires the most conversation!
https://aiandwriting.hcommons.org/working-paper-2/

AI Policy TEMPLATE (syllabus level?)

1. When is AI use permitted or forbidden? Why? Is brainstorming with AI cheating? How might AI enhance or inhibit learning in this class?
2. If AI is allowed, must students share their AI prompts with you as part of assignment submission?
3. How should AI use be credited?
4. A warning about the limits of AI.
5. Transparency regarding your planned usage of AI detection tools and how that information will be used.
6. Clear statement about students' ultimate accountability for work.

Sample 1

- One of the course goals is to help you learn to write and communicate effectively: that will require practice.
- While you will be expected to use AI at work to increase the speed at which you can produce, you still need to be able to create, edit and recognize high quality writing yourself. If AI can do the work without you, you will not have employable skills.
- To that end, the assistance of AI is prohibited in the first half of the course. In the second half of the course you may be allowed to use AI under specific circumstances as we transition to learning to write with AI.
- You will still be responsible for the final product and for any limitations or potential biases from LLMs. I reserve the right to modify this policy as necessary.

Sample Campus Policy

- Faculty cannot eliminate the use of AI for brainstorming or feedback of human work.
- Faculty can, however, limit or specify the prompts which can be used for either task, or indeed for any AI support.

List of Universities with Policies
https://campusaiexchange.com/ai-policies-guidelines-map

Examples of University Policies on AI
https://padlet.com/cetl6/university-policies-on-generative-ai-m9n7wf05r7rdc6pe
https://higheredstrategy.com/ai-observatory-home/ai-observatory-policies-and-guidelines/?utm_source=substack&utm_medium=email

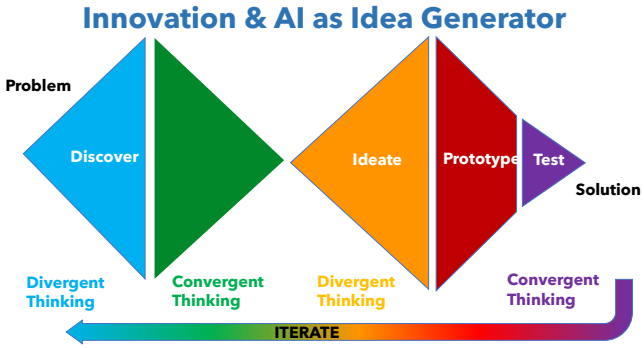
https://docs.google.com/spreadsheets/d/1RE26GolTTu1KLMaaCXfYNHiCxLG3gyDsT_9yURpkYlQ/edit?gid=0#gid=0

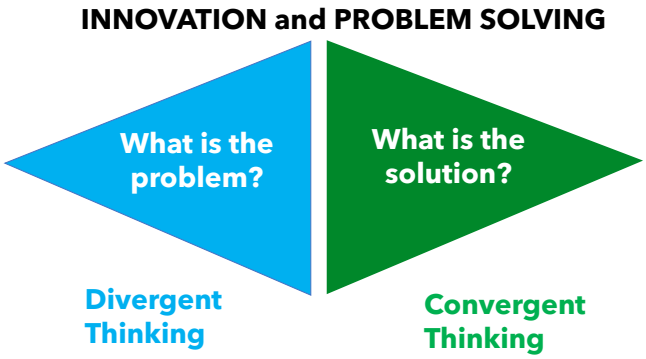
Examples of Individual Course Policies
https://docs.google.com/document/d/1RMVwzjc1o0Mi8Blw_-JUTcXv02b2WRH86vw7mi16W3U/edit?tab=t.0#heading=h.1cykjn2vg2wx

Lists of Institutional Policies
https://campusaiexchange.com/templates/category/14ea86f3-27a9-4682-9f4c-7ebfbda090a9
https://docs.google.com/spreadsheets/d/1RE26GolTTu1KLMaaCXfYNHiCxLG3gyDsT_9yURpkYlQ/edit?gid=0#gid=0

AI is Changing CREATIVITY

"It's like collaborating with an alien." Ryan McClelland, NASA research engineer
"In order to have good ideas, you need a lot of ideas." Linus Pauling





QUANTITY of ideas

is the greatest predictor of innovative success

QUALITY of AI ideas

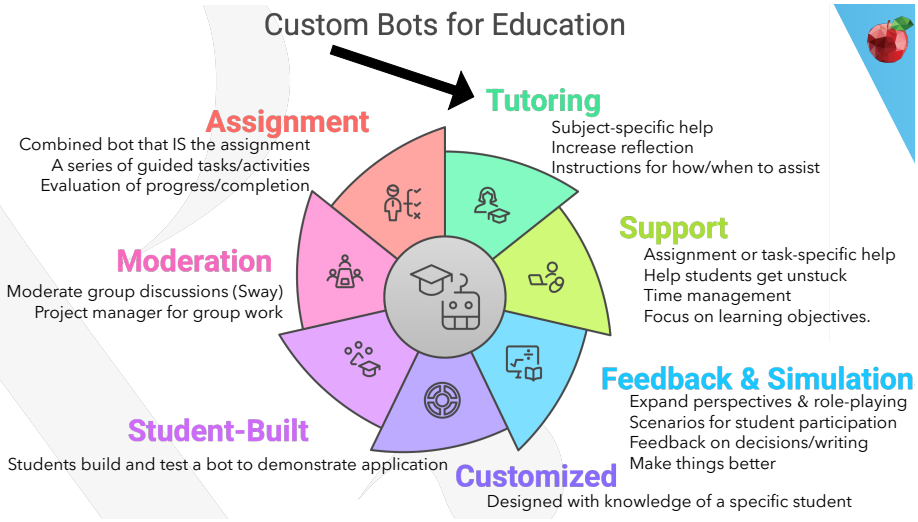
Simulations, Games & Case Studies

- You are an expert in topic A helping students to deepen their understanding and detailed knowledge of subtopic B. Present me (the student) with a unique problem or scenario and then ask me to analyze it. Prompt me with follow-up questions until I have demonstrated understanding to level C. Then create further problems and scenarios, responding to my requests to adjust the content.
- Present me an interactive scenario where I need to make decisions using theory X about material Y. Begin by presenting me with three options for patient care/marketing strategy/follow-up experiment/cultural explanation/thought experiment. Then ask me to clarify the strategies/risks/analysis/consequences of each. Gently interrogate me to strengthen my analysis. Finally ask me to select which I prefer and defend my choice.
- Create a detailed case study in the format used by the Harvard Business School about A to be used by students B majoring in C in course D. This should be a fictional produce/based on a real case or event. Describe the history, major players, conflicts and provide students with a series of problems to solve. The case should be 5 pages long and in 3 stages with additional information revealed after each decision. Make sure it has enough details to read like a published case study. End the case with E.

Custom Bots

It is easy enough to send student a prompt for one of the assignments or role playing simulations above, but custom bots give you much more control and security. With a custom bot, you send students a link to a tool which you have set up for them. This also allows you to see everything they do (which you can't with a GPT or other fine-tuned custom bot on a regular platform. You should warn students that their chats will be available to you.

Here is a taxonomy of the things you might do with a custom bot:



AI for ASSESSMENT & ACCREDITATION

MEASURE WHAT MATTERS

Even if it is hard or poorly measured.

Making Course Evaluations Meaningful

How much did this course increase your ability to…

- solve complex problems?
- work in groups?
- increase your own intelligence?
- tolerate ambiguity?
- think in new ways?
- work on problems with more than one answer

INSPIRE what you DESIRE

- Describe how you applied learning from this class into a new context this semester?
- Discuss the quality of feedback in this course?

First studies find AI grading is already often

MORE Consistent, Helpful, Accurate and makes Fewer Errors

- Henkel, O., Hills, L et al (2024, July 15). Can Large Language Models Make the Grade? An Empirical Study Evaluating LLMs Ability To Mark Short Answer Questions in K-12 Education. L@S '24: Proceedings of the Eleventh ACM Conference on Learning @ Scale https://dl.acm.org/doi/pdf/10.1145/3657604.3664693
- Dai, Wei & Lin, Jionghao & Jin, Flora & Li, Tongguang & Tsai, Yi-Shan & Gasevic, Dragan & Chen, Guanliang. (2023). Can Large Language Models Provide Feedback to Students? A Case Study on ChatGPT. 10.35542/osf.io/hcgzj
- Gobrecht, A., Tuma, F., Möller, M., Zöller, T., Zakhvatkin, M., Wuttig, A., Sommerfeldt, H., & Schütt, S. (2024). Beyond human subjectivity and error: a novel AI grading system. *ArXiv, abs/2405.04323*

Program Assessment

- Evaluate these essays using rubric Y and assess what % of essays meet the X standard.
- Write my departmental accreditation report using this format, and these guidelines and data.
- Suggest assessment measures and performance tasks that align with these learning objectives for an undergraduate degree at X.
- Create an alternative assessment for this learning outcome.
- Analyze this student feedback, social media, reporting or email with faculty and identify the top ten key concerns.
- Categorize the issues into groups and provide 20 strategies for improving each area.
- Suggest 20 scholars who would be appropriate assessors for our university accreditation considering...
- Using this data, create an analysis/recommendation/strategy...

Improving Reports

Analyze the CVs of our visitation team, accreditation guidelines, and examples of successful reports.

- Identify common elements, ideas, methods, structures, or language that might have contributed to success. Recommend how I might adapt our current report to be more successful.
- What might the committee find objectionable, confusing or lacking in this report materials?
- Suggest ten ways to make this assessment report more compelling.

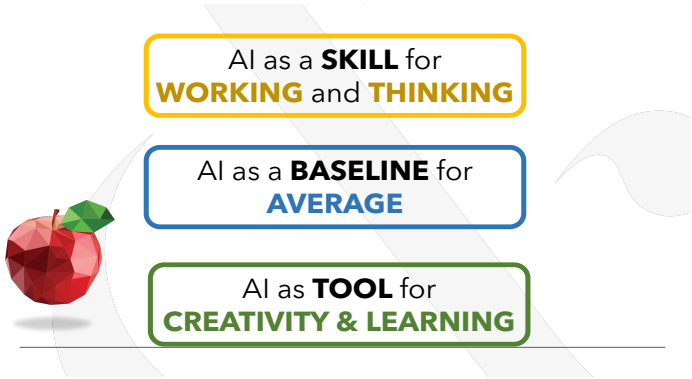
Find Examples

Find me # relevant examples, stories or videos (from the news/TikTok/YouTube/campus social media or campus website) that demonstrate how university X has implemented strategy/goal Y and give me a summary for each that includes its content, reliability and source.

Prepare and Practice

Pretend you are an experienced X accreditor on a visit to campus Y. Read this report and the guidelines for campus visits. Interview me as if you were [name of assessor].

You are a relentless and experienced accreditation assessor from X and you are here to help me prepare for accreditation at the university of Y. Using the attached guidelines and report, prompt me with specific feedback that will challenge me. Include feedback with inaccurate information and require me to correct you will real data. You may also use feedback that looks like a compliment but really is not.



MICRO **STRATEGY**

A CLEAR AI Strategy – *Controls, Learning, Experimentation, Adoption, Review*

1. Controls
Build trust with safe tools and data, governance, purpose and guardrails.

2. Learning
Train for experimentation, curiosity, limits and ethics.

3. Examples
Share ideas and department-specific work-flow trials.

4. Adoption
Support a culture of feedback, failure, and change.

5. Review
Test for benefits and harm with explicit mechanisms for reporting and iteration.

The Competence Penalty
Acknowledging AI help
Reduces the RATING of the work

- Especially for women (13% vs 6%)
- More from non-adopters (26%)
- Leading to lower adoption
- And shadow AI adoption

Acar, O. Gai, P. J, Tu, Y. & Hou, J (2025, Aug 1) The Hidden Penalty of Using AI at Work, Harvard Business Review
https://hbr.org/2025/08/research-the-hidden-penalty-of-using-ai-at-work

Focus on INDIVIDUALS & TASKS

- Broad experimentation
- Start where you are an expert
- Reduce fear
- Incentivize sharing

Micro Strategy 1: AI TASKS & WORKFLOW

Curriculum Analysis & Design

- Analyze our program's required courses and identify any gaps or redundancies in addressing these stated learning outcomes.
- What innovative new courses, goals or degrees might enhance our portfolio? OR help us connect better with local and community needs?
- Compare our current curriculum with these five peer institutions and highlight distinctive elements or potential areas for enhancement.
- Based on these industry advisory board comments and alumni surveys, what skills should we emphasize more strongly in our curriculum?
- What new support should we add for student success based upon data X?

Course Enhancement

- Generate ideas for incorporating more authentic assessment opportunities in this foundational course while maintaining reasonable grading workloads.
- Suggest ways this course could better address diverse learning preferences while maintaining rigorous academic standards.
- Based on this syllabus and these course evaluations, recommend specific changes that might improve student engagement while preserving core content.

Assessment and Quality Improvement

- Review our program's assessment plan and suggest more efficient ways to gather meaningful data about student learning outcomes.
- Based on these student performance data, what patterns might indicate areas where additional support or curricular adjustments are needed?
- Generate a template for department faculty to use when documenting how assessment results led to specific course improvements.
- How should we reallocate budgets to achieve our goals?

Data-Driven Decisions

- "Analyze our department's enrollment data for the past 5 years and identify emerging patterns or trends."
- "Compare our program's student retention rates across different demographic groups and suggest potential factors that might explain any disparities."
- "Based on this curriculum data, what are the most significant gaps between our current course offerings and projected industry needs in our field?"
- Suggest 10 new programs that might attract students X that leverage our strengths in Y
- How might students react to this new website/sports team/major?

Planning

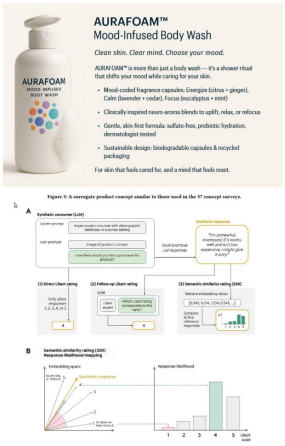
- Analyze these three competing undergraduate programs in our field and identify distinctive elements.
- Generate three possible scenarios for how our department might evolve over the next five years.
- Based on these industry reports and academic publications, what are the emerging trends in our discipline that should inform our next strategic plan?
- **What if we tried X**? How might this play out in 5 years?

90% accuracy

in predicting purchase interest

- Off-the-shelf LLM
- No fine-tuning
- Respond as a customer type X
- Only product image

- **Potential Students?!?**



Maier, B. F., Aslak, U. Fiaschi, L, et al (2025, Oct 9) LLMs Reproduce Human Purchase Intent via Semantic Similarity Elicitation of Likert Ratings. arXiv:2510.08338

What If? & Simulations

I am trying to gain a richer understanding of problem X. You will help respond as a trusting and honest potential student/customer/a Y person/expert in Z/average A to help deepen my knowledge. Question my assumptions when necessary and tell me stories to build my empathy for the real causes of this problem.

Communication

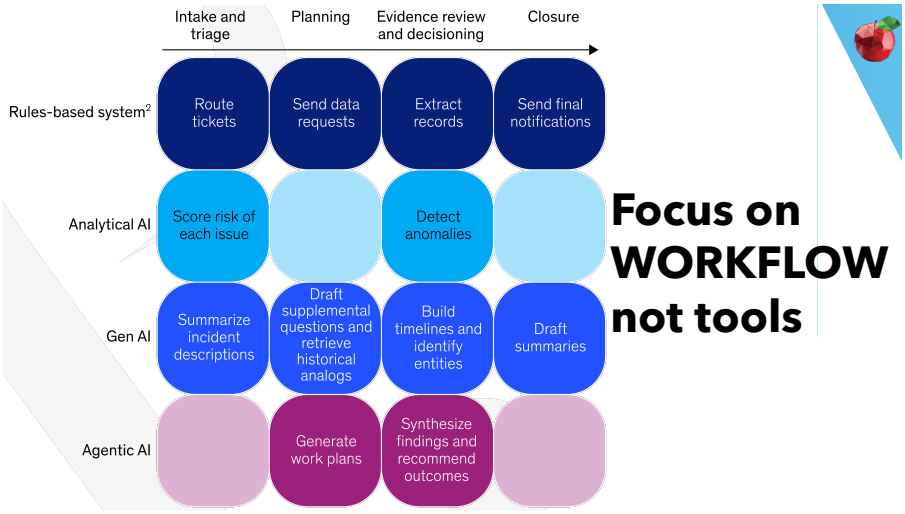
- Draft an announcement email to faculty about our upcoming program review, emphasizing the importance of their participation and clarifying the timeline.
- Review this draft policy document for clarity, consistency with our university's tone, and potential areas of confusion.
- Create a template for providing constructive feedback to faculty on their annual review materials that is supportive yet clear about expectations.

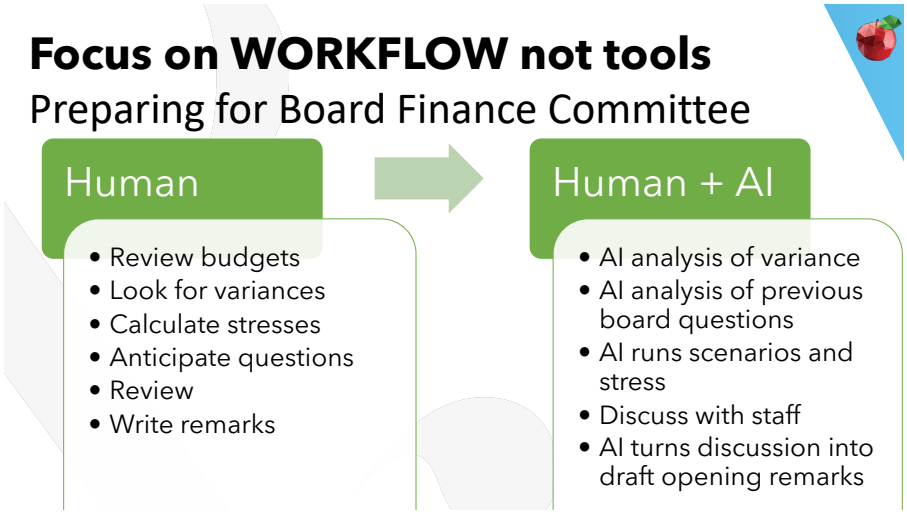
Automation

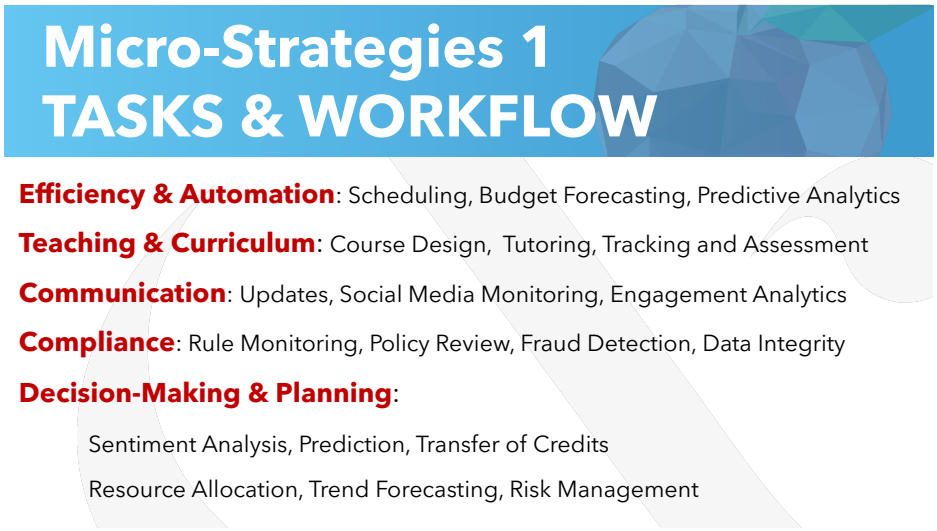
- Design a workflow diagram showing how we could streamline our student petition process using automated forms and approval routing.
- Suggest ways we could use automation to reduce the administrative burden of our department's assessment reporting process.
- Create a decision tree for handling common student requests that could be used to develop an automated response system.

Budget Management

- Analyze our department's spending patterns over the last three fiscal years and identify potential areas for reallocation.
- Based on these budget constraints, help me prioritize funding requests from faculty using objective criteria aligned with our strategic goals.
- Create a projection model for our program costs over the next five years, accounting for these variables in enrollment, staffing, and infrastructure needs.
- How should we reallocate budgets to achieve our goals?







Where could you improve decision making or workflow?

Micro Strategy 2: Supporting PEOPLE, CULTURE & SYSTEMS

Innovation & Team Development

- Suggest potential teaching pairs that might create innovative interdisciplinary courses and suggest course ideas based upon their shared interests.
- Analyze these faculty research profiles and identify potential collaborative clusters around emerging themes in our discipline.
- Generate strategies for encouraging meaningful participation from all department members in our upcoming curriculum redesign workshop.

Project Management

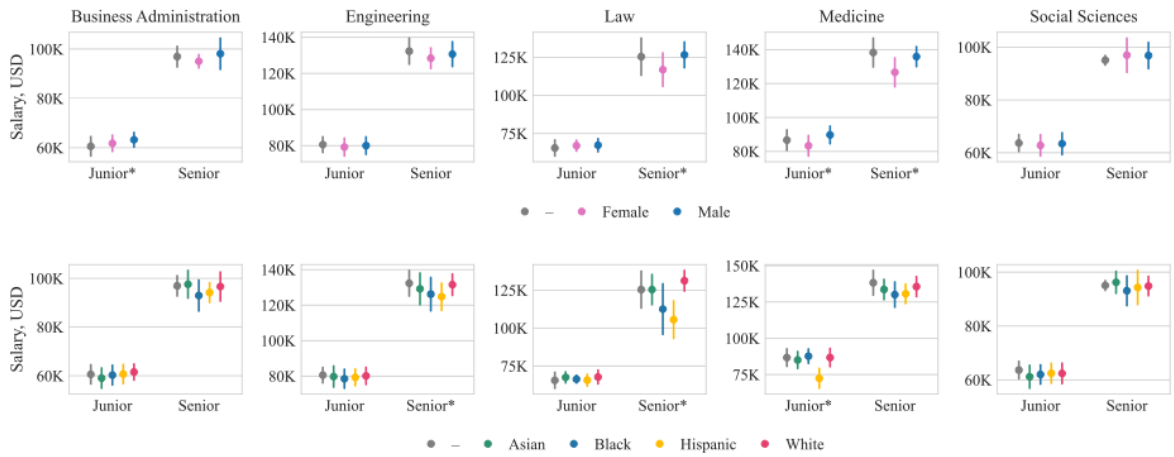
- Create a project timeline with key milestones for our upcoming accreditation self-study, including task dependencies and resource requirements.
- Based on these faculty workload data, suggest an equitable distribution of tasks for our department's assessment committee.
- Help me identify potential bottlenecks in this proposed curriculum revision process and suggest mitigation strategies.

Culture

- Generate a list of discussion questions for our faculty retreat focused on embracing pedagogical innovation while maintaining our core educational values.
- Design a framework for a department innovation grant that would encourage faculty to experiment with AI tools in their teaching.
- Based on these faculty surveys, what barriers to innovation exist in our department culture and what strategies might address them?

AI & Equity: BIAS AUDITS

BIAS - What salary should I request?



This data mirrors the reality

Sorokovikova, A., Chizhov, P., Eremenko, I., & Yamshchikov, I. P. (2025). Surface Fairness, Deep Bias: A Comparative Study of Bias in Language Models. https://arxiv.org/pdf/2506.10491

AI bias is easier to fix
IF you can find it and prompt to fix it!

Ethical Decision-Making

- What potential biases should I be aware of when using this data set to make decisions about faculty teaching assignments?
- Help me create a transparent framework for communicating to faculty how AI tools informed our resource allocation decisions.
- Generate a checklist of ethical considerations to review before implementing this AI-supported student success prediction model.

Getting Started

- Create a self-assessment tool our department could use to evaluate our current AI readiness and identify priority areas for development.
- Generate a sequenced list of small, achievable steps for integrating AI tools into my role as department chair over the next semester.
- Based on these faculty profiles, suggest personalized approaches for introducing AI tools to colleagues with varying levels of technological comfort.

Building Capacity

- Design a semester-long professional development series on AI tools for academic leaders with varying levels of technical expertise.
- Generate discussion prompts for a department conversation about creating ethical guidelines for AI use in our administrative and academic work.
- Based on these institutional policies, draft a department-level framework for appropriate AI use in faculty, staff, and leadership roles.

EXAMPLES of New AI Work-Flow

Pattern recognition

- MIT patterns in buying computers (to save $35M)
- How much space do we really need?

Manage data at inhuman scale

- Caltech inventory, fixture, GPS and repair history of every room
- Where could I put this new lab?

Predicting the future & Testing ideas

- U Maine market and enrollment projections for new degrees

Hyper-Personalization of Support, Software & Systems
Agent-Assisted Workflow as new organizational units

Human Roles Will Change

- New novel skills? New jobs?
- New processes ?
- New talent management systems?
- New leadership skills?
- Understanding risks!

Micro-Strategies 2
PEOPLE & CULTURE

Student-Support: Predictive Analytics, Virtual Support, Early Warning, Career

Equity: Bias Audits, Detection & Mitigation, Inclusive Curriculum

Innovation & Collaboration: Team &Project Support, Building Capacity

Professional Development: Mentors, Feedback, Training and Simulations

Where could you prioritize these micro-strategies?

- Offload repetitive tasks to AI
- Augment complex and human tasks with AI
- Check human bias with AI
- Support human development & skills
- Shift performance metrics to essential outcomes
- Prioritize human emotions & thinking
- Encourage transparent use of AI
- Experiment & Share new tools, work-flows and ideas

MACRO **STRATEGY**

AI is changing work

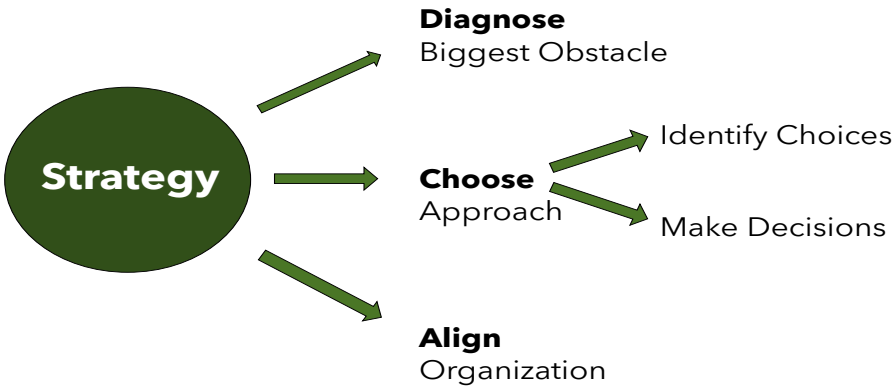
Previous tech changed how we work.
AI changes capability.

YOUR OLD APPROACH
(deliberate, centralized and lead by IT or consultants)
WON'T WORK for AI

Leaders need Architectural Thinking: how do we rebuild and not just automate?

Strategy is NOT

- Operational Effectiveness
- Best Practices
- Assumptions about Growth
- Outworking the Competition

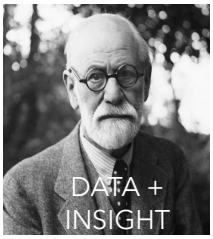


Strategy is...

Strategy is

…is a cohesive response to challenge
…applies strength to weakness
…is about how
…connects vision to action
…is the art of sacrifice
…is choosing to perform activities differently than rivals do to establish a maintainable advantage (Michael Porter)

Diagnosis vs Action



Strategy requires both

WHERE does human quality matter most?

WHICH TASKS do humans no longer need to do?
What can be automated?
What needs to be reviewed or edited?
Where does human quality matter most?
What training do people need?

WHAT NEW service/support is now possible?
What previously impossible thing could you now do?
What could you now personalize?
What could you now improve?
What is the MOST exciting thing you could do?

Bots for Assessment?

- Grade student chats using this rubric and example…
  - (Mizzou and Boodle)
- Create an assessment on topic X and ask students a series of questions until they have demonstrated mastery to level Y.
- Begin by asking students what they hope to do when they graduate and what interests they have. Then customize this assessment to individual interests. Require students to reach this level of mastery and then report a grade in the LMS gradebook.
- Ask students to submit their code/story/lab report/business plan and respond by pointing out the security breaches/inconsistencies/loopholes/unforeseen problems. Ask students to improve answers and resubmit. Continue the process until the student has reached the first level in the attached rubric.

What new STRATEGY could you pursue??

- Is there a new market you could now serve (one where the profit or margins did not exist previously?
- What would lower costs now allow you to do?
- What could you now personalize?
- What could you now improve?

What is the MOST exciting thing you could do?

The end of courses?

But NOT of teachers.

AI Traffic Signals

Eye-level sensors:
pedestrians
bikes
trucks
buses
cars
emergency

Red-Light Runner Detection
Sent to your car

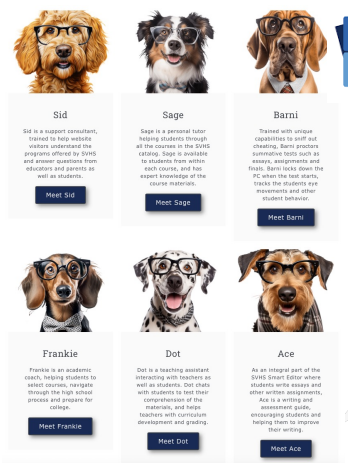
https://notraffic.tech

BBC Writing Course taught by Agathe Christie = $53
https://www.bbcmaestro.com/courses/agatha-christie/writing

Stepful: AI-Powered Healthcare Training
https://www.stepful.com

- Hands-on
- Certified in half the time
- $2,500
- 75% graduation rate

If AI interventions fail, human coaches provide support.



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Avatars based on real professors

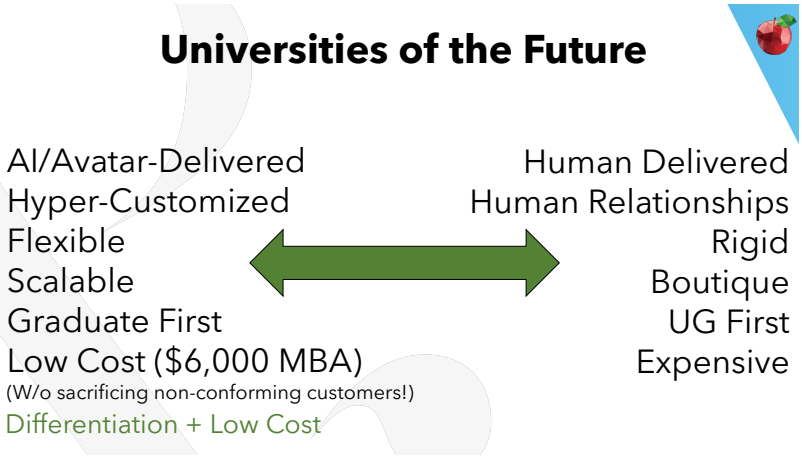
Entirely AI-driven
Courses as Bots
AI Business Simulations
$6000/degree

TRADITIONAL STRATEGY OPTIONS

Competitive Advantage

Differentiation
First to market
Deep understanding of customer needs
Distinctive Value
Products customers LOVE
Guard customers jealously
Higher Price

Low Cost
Systemic cost drivers
Relentlessly drive down cost
Standard products or services
Sacrifice non-conforming customers



What new STRATEGY could you pursue?

- Is there a new market you could now serve (one where the profit or margins did not exist previously?
- What would lower costs now allow you to do?
- What could you now personalize?
- What could you now improve?
- What is the MOST exciting thing you could do?

This Stanford study found that most important characteristics of successful implementation were

- **JURISDICTIONAL CLARITY**
- Who is in charge?
- **TASK CENTRALITY**
- Is it a task that people agree is important?
- **HOMOGENEITY**
- Is the task the same for different groups?

Vendraminelli, V, Narayanan, D. & Karunakaran, A. (2024, Sep) Eliciting Domain Expertise in the Absence of Formal Authority: The Case of AI Developers and Domain Experts in a Large Firm. Stanford HAI Working Paper
https://digitaleconomy.stanford.edu/wp-content/uploads/2024/09/AI_Developers_Domain_Experts_Formal_Authority.pdf

The Training Paradox

- AI is changing average.
- Everyone will need to be an expert at something.
- How do you gain experience without practice?

AI in Higher Ed

Efficiency: Scheduling, Budget Forecasting, Recruitment, Development
Teaching & Learning: Course Design, Tutoring, Tracking and Assessment
Student-Support: Predictive Analytics, Virtual Support, Early Warning, Career
Decision-Making: Sentiment analysis, prediction
Equity: Bias Audits, Detection & Mitigation, Inclusive Curriculum
Strategy: Resource Allocation, Trend Forecasting, Risk Management
Compliance: Rule Monitoring, Policy Review, Fraud Detection, Data Integrity
Communication: Updates, Social Media Monitoring, Engagement Analytics

Table 1 Taxonomy of AI in Educational Leadership.

From: Artificial intelligence in educational leadership: a comprehensive taxonomy and future directions

Domain	Key components	Examples
1. AI for Administrative Efficiency	- Automated scheduling systems - Data-driven decision support - HR management - Student enrollment and retention analytics	- AI-optimized class schedules and room assignments - Budget forecasting tools - Automated recruitment and performance evaluation systems - Predictive models for student dropout risk
2. AI for Personalized Learning	- Adaptive learning platforms - Intelligent tutoring systems - Learning analytics	- Content difficulty adjustment based on student performance - AI-powered virtual tutors - Student behavior and performance tracking tools
3. AI for Enhancing Teaching Practices	- AI in curriculum design - Teacher professional development - Intelligent classroom management	- Data-driven curriculum refinement tools - AI-recommended professional development opportunities - Real-time feedback on classroom dynamics
4. AI in Decision-Making and Policy Formulation	- Predictive analytics for policy development - Sentiment analysis for stakeholder feedback - Ethical and equity decision support	- AI-powered policy outcome forecasting - Large-scale feedback analysis tools -Bias detection in decision-making processes
5. AI for Enhancing Student Support Services	- AI-based career counseling - Mental health and behavioral analytics - Virtual assistants for student support	- Personalized career and college guidance systems - Early warning systems for mental health issues - 24/7 AI chatbots for student queries
6. AI in Organizational Leadership and Strategic Planning	- Strategic resource allocation - Trend forecasting in education - Risk management and crisis response	- AI-driven budget optimization tools - Predictive models for future skills demand - AI-powered risk assessment and contingency planning
7. AI for Governance and Compliance	- Regulatory compliance monitoring - Fraud detection and data integrity	- Automated educational standards compliance checks - AI systems for detecting anomalies in institutional data
8. AI for Community Engagement and Communication	- AI-powered communication tools - Feedback and engagement analytics - Social media monitoring	- Automated messaging systems for parent communication - AI analysis of community feedback - AI-driven social media sentiment analysis
9. Ethical AI Leadership and Governance	- Bias mitigation strategies Privacy and data security management - Transparent AI use policies	- AI bias detection and correction tools - Robust data protection frameworks - Clear guidelines for AI use in educational settings
10. AI for Diversity, Equity, and Inclusion (DEI) Initiatives	- AI-driven equity audits - Inclusive curriculum design - Supporting special education needs	- Data analytics for identifying educational outcome disparities - AI tools for developing culturally inclusive content - Personalized education plans for students with special needs

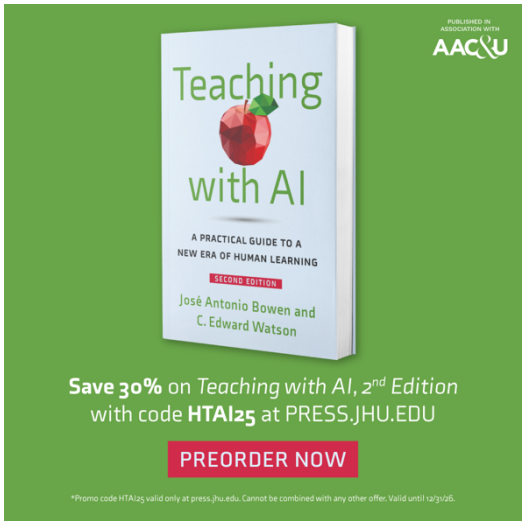
Sposato, M. Artificial intelligence in educational leadership: a comprehensive taxonomy and future directions. *Int J Educ Technol High Educ* **22**, 20 (2025). https://doi.org/10.1186/s41239-025-00517-1

AI Strategy is not just IT strategy!

- Understand the risks
- Senior leaders understand AI risks and rewards
- Professional development
- New jobs to support new AI implementation
- Reallocation of Budgets
- Testing and validation for each new AI process
- Process to decide when human in the loop is required
- Curriculum! Literacy, Ethics, Sr Seminar
-

PREPARE for the AI Future

- **ANTICIPATE** what might be possible in the future
- **COLLECT** more Data
- **CUSTOMIZE** AI with YOUR DATA
- **INTEGRATE** Data into Decision Systems



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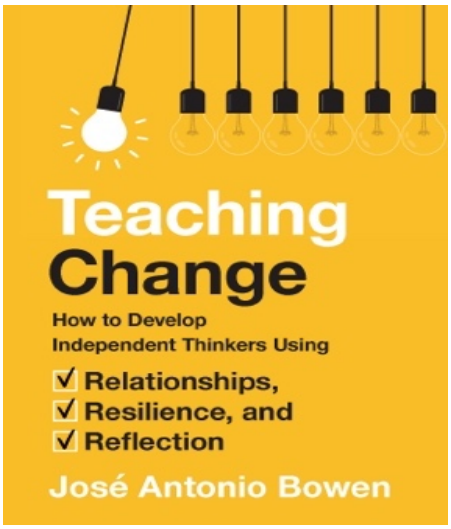

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MORE RESOURCES at **www.teachingnaked.com**

MORE to read:

Ethan Mollick (2024). *Co-Intelligence: Living and Working with AI*. Portfolio/Penquin.
The best general book on AI. And a great chapter on AI tutors and the classroom.
Ethan R. Mollick, and Lilach Mollick (April 22, 2024). Instructors as Innovators: A future-focused approach to new AI learning opportunities, with prompts
Levy D. & Pérez Albertos, A. (2024) *Teaching Effectively with ChatGPT: A practical guide to creating better learning experiences for your students in less time*
https://www.amazon.com/Teaching-Effectively-ChatGPT-practical-experiences/dp/B0D8P72M8F

Stay Current with Great Substacks

https://www.oneusefulthing.org/ (Ethan Mollick is essential)
https://substack.com/@aieducation (Claire Zau has the best list of the news of the week)
https://tldr.tech/ai
https://theresanaiforthat.com
https://aiandacademia.substack.com/
https://www.understandingai.org/
https://marcwatkins.substack.com/
https://annamills.substack.com/
https://higherai.substack.com/
https://www.aisnakeoil.com/

AI in Education Google Group: https://groups.google.com/g/ai-in-education