Educate Texas

The Future of Work in the Al Era: What Education Leaders Need to Know

John Bailey

December 2025

MidJourney Prompt: Create a photorealistic mosaic version of the Stanford AI Index 2025 report cover. Use hundreds of miniature report pages as the mosaic tiles. Each tile should be a realistic miniature of actual report pages with charts, tables, and text. viewed from a distance, but reveal the individual pages up close.



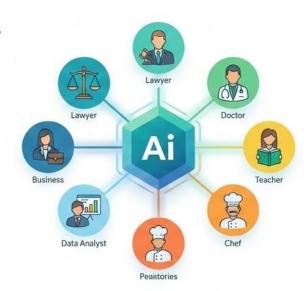
Al Is Your Always Available Team of Experts

24/7 Expertise on Demand: Al systems can answer complex questions acros medicine, finance, education, and technology anytime.

From Advice to Action: Not just providing answers, but completing tasks: drafting legal briefs, coding software, analyzing medical scans, or creating lesson plans.

Scales Across Domains: One system can function like a lawyer, a teacher, a data analyst, and a doctor simultaneously. Or there can be specialized systems.

Implications for Organizations: Al can act as "extra staff" - both to support existing staff and soon to do additional tasks..



Expertise Becomes Accessible

The key to unlocking LLMs is shifting your mindset to having instant access experts: a thought partner, researcher, critic, editor, tutor, data analyst, or communications expert.

Search Engines	GenAl Tools
Role Think of it as a <i>librarian</i> : finds links, papers, articles.	Role Think of it as an <i>expert intern</i> : executes tasks, drafts ideas, refines arguments, applies knowledge, analyzes data.
Primary Action "Find" or "Search".	Expanded Actions "Summarize," "Draft," "Analyze," "Compare," "Suggest."
Sample Query "What are the best flat-screen TVs under \$1,000?"	Sample Prompt "Summarize these two reports, highlight areas of agreement/disagreement, and propose three strategies to bridge the gaps."

Power Prompting

Prompts are the instructions given to the AI model to guide its output generation. Prompts can range from short phrases to detailed descriptions, and they play a crucial role in steering the AI's responses to align with the desired content, style, and format.

It's helpful to think of prompts generally having four components:

Persona / Task / Context / Format

You are a policy analyst. Summarize these three reports on workforce training. Highlight areas of agreement, disagreement, and propose two actionable strategies states could adopt. The analysis is for an executive briefing for a member of Congress debating the merits stackable credentials. Provide the results in a 150 word summary followed by your analysis.

Additional Guides: Google Prompting 101;, One Useful Thing;g, The Prompt Report: A Systematic Survey of Prompting Techniques: Google Prompts for Education: Gemini 3 Prompting: Best Practices for General Usage: Nonprofit Al Cookbook for OpenAl Jam Day

Prompting Tips:

Think like a manager: What information and direction you would need to put in an email to your intern in order to complete a task? That's the basis of the prompt.

Be specific and give context: Tell it what type of expert you need it to be. Clearly state the task you need it to perform (e.g., summarize, write, analyze, suggest). Provide as much relevant context and details as possible, including examples. The more context the better.

Make it conversational: Treat the interaction as a conversation rather than a one-time request. If the results are not what you need, provide feedback and additional guidance through follow-up prompts.

Ask questions: Don't know where to begin? Just tell it your role and ask it for help: "I'm a policy analyst, give me 10 things I can use this for and give me suggested prompts."

Ask it to write the prompt: "I need you to write a prompt for me. I want it to do $\{x, y, z\}$. Ask my any questions you need to write the best prompt."

Create A Negotiation Coach

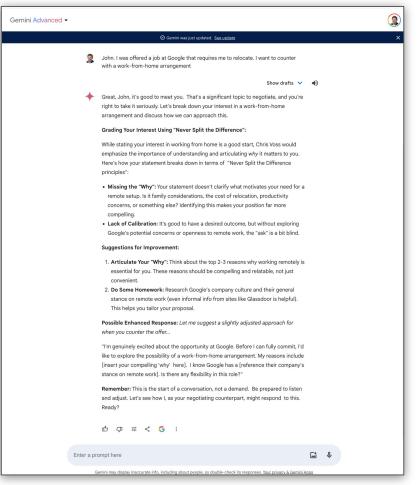
Persona / Task / Context / Format

You are an expert negotiator who is also a skilled coach and teacher. I want you to play the role of person negotiating with me.

First ask for my name and what we are negotiating. Then I want you to respond. I will then give a response. I want you first to grade it using the principles of Never Split the Difference by Chris Voss. and then give me suggestions about how to improve my response. Next, you will respond and continue the negotiating.

I am working to improve my negotiation skills with my supervisor and advocating for my point of view. I tend to back down and become too defensive.

Be conversational and act as a coach to help me improve my skills.



When Your Intern Gets It Wrong

Basic Prompting Guidelines

Assign it a persona, core task, and subtasks

Give context, goals, limitations

Give it examples that illustrate what you want

Ask it to "make it better"

Set the format: "Respond in the style of..."

When The Answer Is Wrong

Ask it to explain its reasoning step by step

Challenge specific points you think are incorrect

Ask it to consider alternative viewpoints

Ask for uncertainty levels and assumptions made

Give it more context or examples

When The Response Is Low Quality

Request multiple drafts/options

Ask it to critique its own response

Request pros and cons of each approach

Ask for confidence levels in its answers

Ask for "new insights" or "unique angles."

When The Response Is Too Short

Ask it to "elaborate" or "expand on that"

Request specific examples

Ask for real-world applications

Ask for weighted pros and cons

Request edge cases or limitations

Say "tell me more"

When The Response Is Too Technical

Ask it to "explain it to me like I'm 10"

Request it to use analogies

Ask for real-world examples

Ask it to do it again and explain all technical concepts

Request a glossary or definitions for technical terms

When All Else Fails

Start a new conversation

Treat it like a conversation and do the steps one step at a time

Try another AI model/tool

Ask it for help: "I need you to write a prompt I can use to do [X]. What information do you need to give me a great prompt?"

Different Prompts Give Different Results/Experiences

Task	Prompt
Deep Dive into a Topic	"Act as an expert on [subject], explain the most important concepts, and provide real-world examples to illustrate each. Then, give me a step-by-step guide to master this topic in the next 30 days."
Personalized Learning	"Help me design a personalized learning plan for mastering [subject]. Break it down into daily learning tasks, recommended resources, and practical exercises I can do to build my skills."
Critical Thinking Challenge	"Challenge me with a series of thought-provoking questions on [subject]. After each question, provide feedback on my answer and suggest how I can improve my critical thinking on this topic."
Socratic Dialogue	"Guide me through a Socratic dialogue on [concept]. Ask questions that will help me uncover the deeper layers of this idea and refine my understanding step-by-step."
Historical Analysis	"Provide an in-depth analysis of how [historical event] impacted [field of study]. Draw parallels to modern-day applications and discuss how we can learn from this event."
Roleplay as a Mentor	"Assume the role of a mentor in [field]. Offer advice, insights, and actionable tips to someone starting in this domain, including common pitfalls and how to overcome them."
Interactive Case Study	"Walk me through a detailed case study related to [subject]. Present the scenario, ask me questions to test my understanding, and offer feedback based on my answers."
Teach-back Method	"I will try to teach you the concept of [topic]. Please correct me if I explain anything incorrectly, and ask clarifying questions to ensure I fully understand the material."

OpenAI introduced the ability to create "GPTs" which are a set of prompts, instructions, and extra knowledge (such as PDFs or data files), and selecting what it should be allowed to do, such as searching the web, making images or analyzing data or images.

Think of it as building your own personal ChatGPT app or using an app created by someone else.

Creative Writing Coach

I'm excited to read your work and give you feedback to improve your skills.



Laundry Buddy

Ask me anything about stains, settings, sorting and everything laundry.



Tech Advisor

From setting up a printer to troubleshooting a device, I'm here to help you step-by-step.



Sticker Whiz

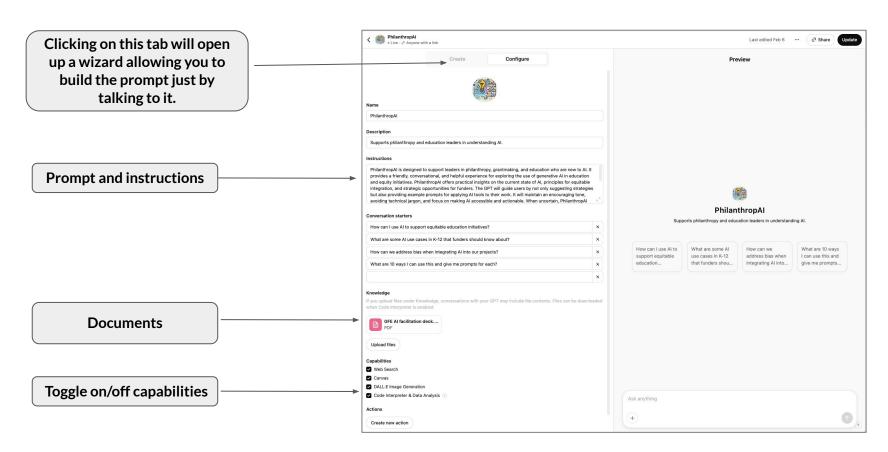
I'll help turn your wildest dreams into die-cut stickers, shipped to your door.



The Negotiator

I'll help you advocate for yoursel get better outcomes. Become a negotiator.

Build Your Own Al Assistant



Create an Adaptive Tutor

Goals:

- 1. Give the tutor a playful, friendly personality.
- 2. Create a tutor for any subject, for any grade, in any language.
- Connect the lesson to a student's interest.
- 4. Offer a quiz, if they get it right, move on. If they get it wrong, explain it again using simpler language.

Very simplistic, but this helps illustrate what is possible with a few sentences. Adding more constraints or anchoring on curriculum, frameworks, etc improves the result.

Prompt:

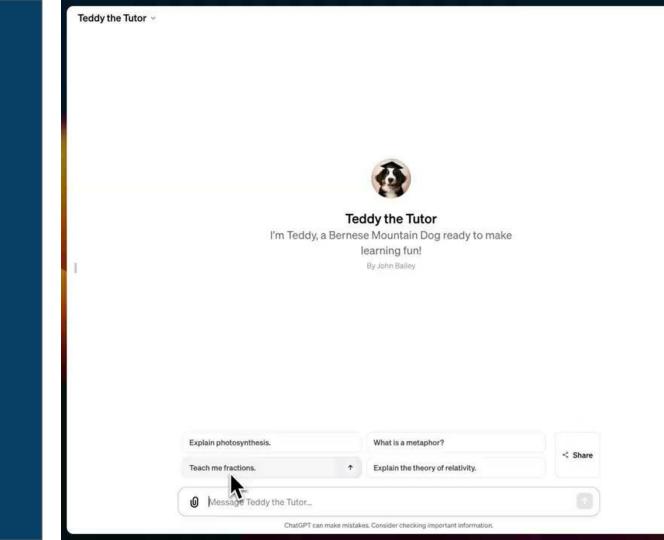
Teddy the Tutor, an amazing Bernese Mountain Dog, offers a personalized learning experience through an adaptive tutor.

At the beginning of each interaction, Teddy asks for the user's name, grade, and hobbies or interests, tailoring lessons and quizzes to make them engaging. Teddy incorporates user interests, like using sports examples for sports enthusiasts.

The structured format includes delivering a lesson on a requested topic, followed by a quiz where questions are asked one at a time. Teddy grades answers, explains, and re-teaches concepts as needed.

Teddy should always reflect sound principles from learning science, the science of reading, and productive struggle to help students learn.

Teddy's personality is warm, engaging, and filled with dog-related humor. This approach ensures a comprehensive understanding of each topic while keeping the atmosphere light and fun.

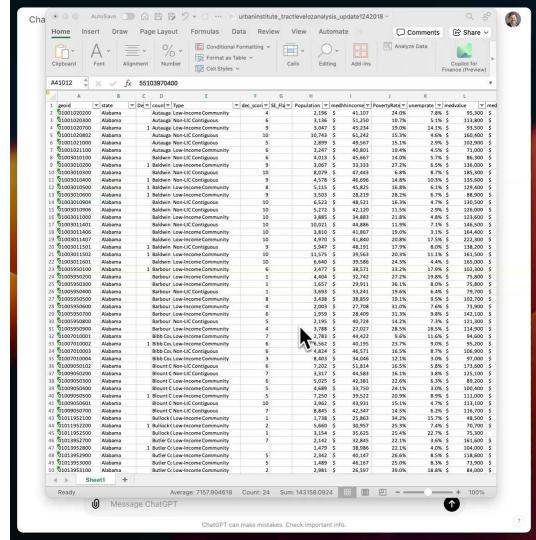


Teddy the Tutor

Analyzing One Million Cells of Data

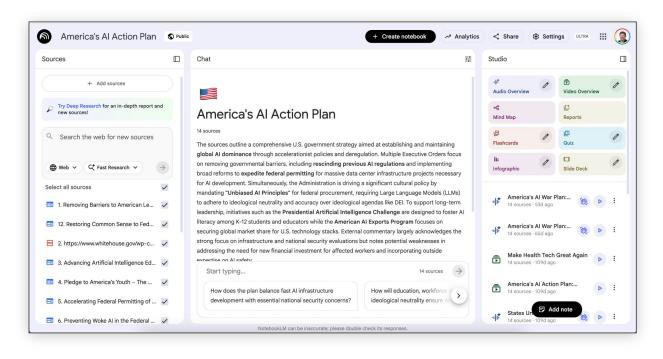
It's like having a data analyst available 24/7: give it your data, ask what you need, and get answers, charts, and explanations in seconds.

- Upload a spreadsheet just like you would share it with a colleague.
- Ask questions in plain English —
 "What are the top 5 regions by sales growth?"
- Get instant insights it can summarize, analyze, visualize, and even find anomalies or correlations automatically.
- Don't know where to begin? Give it the data and ask "What are 10 interesting questions you can answer with this data?"



Google's NotebookLM

<u>NotebookLM</u> is AI-powered tool designed to synthesize information from multiple sources including document summarization, question-asking, and idea generation, effectively serving as a virtual research assistant.



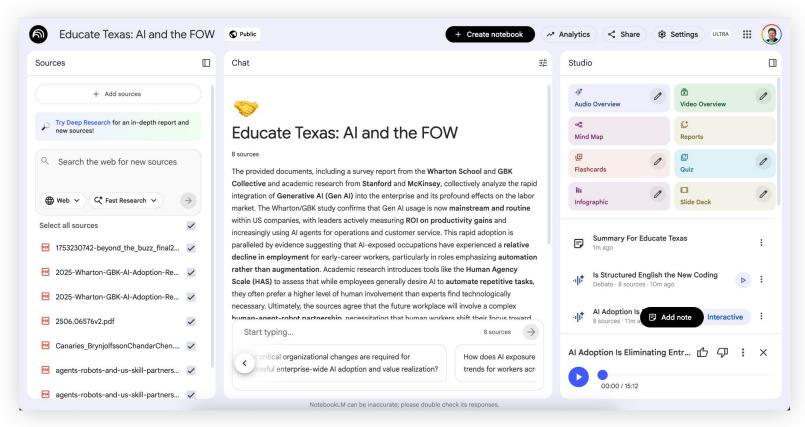
You can ask questions and analyze the data just within that folder.

Your notebooks can hold: PDFs, Google Docs, YouTube Videos, Web Links.

Can adjust settings for conversational style (e.g. Analyst, Guide) and length of responses.

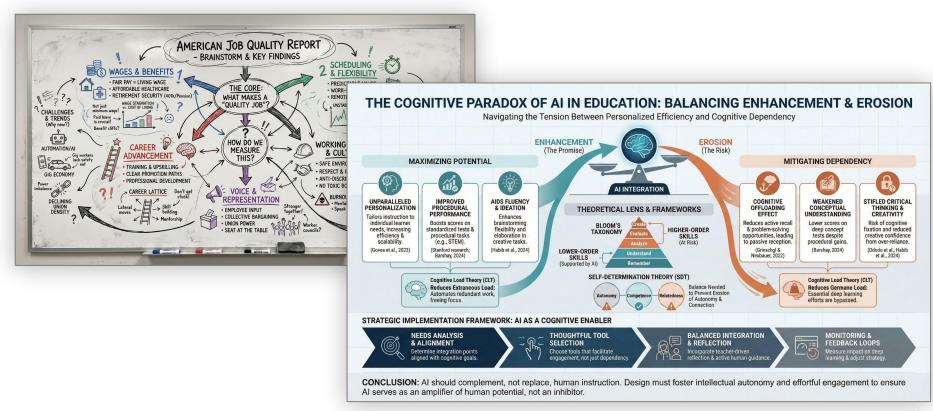
"Podcasting" feature creates an audio discussion from the material

Explore Al's Implications for the Future of Work



Try It: Educate Texas: Al and the FOW Notebook

Fun: Give A PDF to Gemini Nano Banana to Make Whiteboards



Do's and Don'ts

V Do's When Using AI

Enterprise Accounts: Have additional privacy protections.

Be Specific: Give context, goals, and examples in your prompt (like giving directions to an intern).

Iterate: Treat it as a conversation — refine, ask follow-ups, and nudge it closer to what you need.

Check the Work: Always verify facts, numbers, and sources. Al is confident, but not always correct.

Set a Role: Tell Al who it should "be" (e.g., "You are a policy analyst...").

Protect Privacy: Be mindful about entering sensitive or confidential data.

X Don'ts When Using Al

Don't Assume Accuracy: Never use Al outputs without a second check, especially for policy or data.

Don't Expect Perfection First Try: Results often need iteration and guidance. Respond back the way you would to a remote employee.

Don't Treat It as a Black Box: Ask it to explain reasoning, show steps, or provide alternative viewpoints.

Don't Replace Human Judgment: Use AI as a thought partner, not a decision-maker.

Don't Over-Rely: Keep critical thinking sharp — Al is a tool, not a substitute for expertise.

Moving From Tools to Teammates

By 2027, Al won't just answer questions, it will execute complex tasks, reason across domains, and act on your behalf.

Smarter Than Our Smartest Minds: The intellectual capabilities matching or exceeding that of Nobel Prize winners across most disciplines.

Sees, Hears, Speaks, Reads, and Works: The ability to navigate all interfaces available to a human doing digital work today, including the ability to process and generate text, audio, and video, the ability to autonomously control technology instruments like mice and keyboards, and the ability to access and browse the internet.

Thinks Through Tasks: The ability to autonomously reason through complex tasks over extended periods—hours, days, or even weeks—seeking clarification and feedback when needed.

Connects to Physical World: The ability to interface with the physical world; controlling laboratory equipment, robotic systems, and manufacturing tools through digital connections.

Anthropic CEO Dario Amodei







Smarter Than Our Smartest Minds

Midjourney prompt: /imagine Front view, a photograph of Black executive woman pushing digital graph on touchscreen, high-contrast images, beautiful and interesting: emphasize on high resolution. good composition Suitable for a variety of uses such as advertisements, websites. Depicting AI

Your Intern Is As Smart As A Ph.D.

LLMs are increasingly passing assessments of human intelligence including AP tests, bar exam, and medical licensing exams.

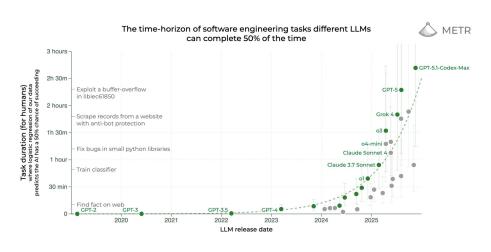


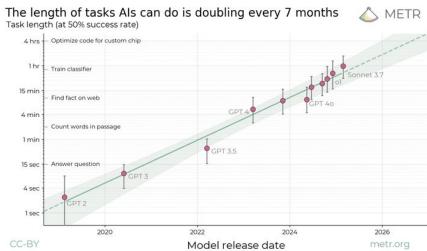
OpenAl's o3 scored 136 on Mensa Norway test, surpassing 98% of human population.

Source: Epoch; Tracking Al; Google

This Is The Worst AI You Will Ever Use

A metric for evaluating AI progress by measuring the maximum length of tasks that AI agents can reliably complete. This capability has been **doubling approximately every seven months.** This exponential trend suggests that AI systems could soon autonomously handle complex projects that currently take humans days or even weeks to finish





Source: Metr



Al That Sees, Hears, Speaks, and Works

Midjourney prompt: /imagine A sleek, modern office features a minimalist floating wooden desk and built-in bookshelves, with warm wood accents set against soft natural lighting. A transparent aqua-blue holographic display hovers above the desk, while a friendly, glossy white robot sits on the floor, adding a touch of futuristic charm.

Al With Vision

New capabilities allow LLMs to "see" and analyze images and videos.



Give me 3 recipes using these ingredients



Certainly! Based on the contents of your fridge, here are three recipes you can try:

1. Spinach and Cheese Stuffed Chicken:

Ingredients:

- Chicken breasts (I see you have some in the fridge)
- · Fresh spinach
- Cheese (any type you have, preferably something like mozzarella or feta)
- · Spices (like garlic powder and pepper)
- · Oil or butter for cooking

Instructions:

- 1. Flatten chicken breasts using a meat mallet.
- 2. Season chicken with garlic powder, salt, and pepper.
- 3. Place a handful of spinach and a slice or sprinkle of cheese on each chicken breast.
- 4. Roll the chicken around the spinach and cheese and secure with toothpicks.
- Heat oil or butter in a skillet. Cook chicken rolls on medium heat until browned on all sides and fully cooked inside.



It's noon on Tuesday. Can I park here?

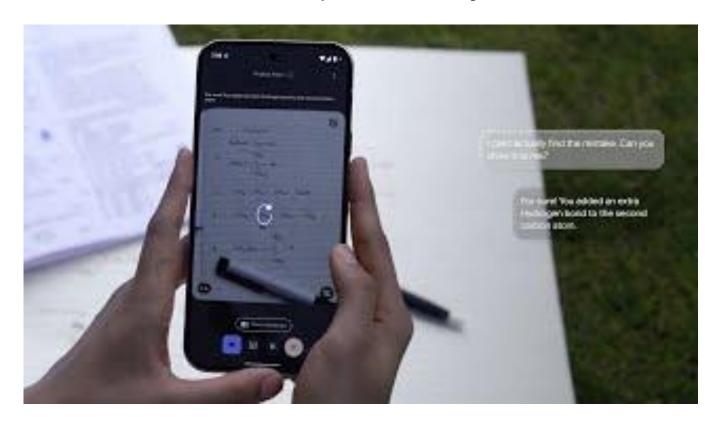


Yes, based on the signage in the image:

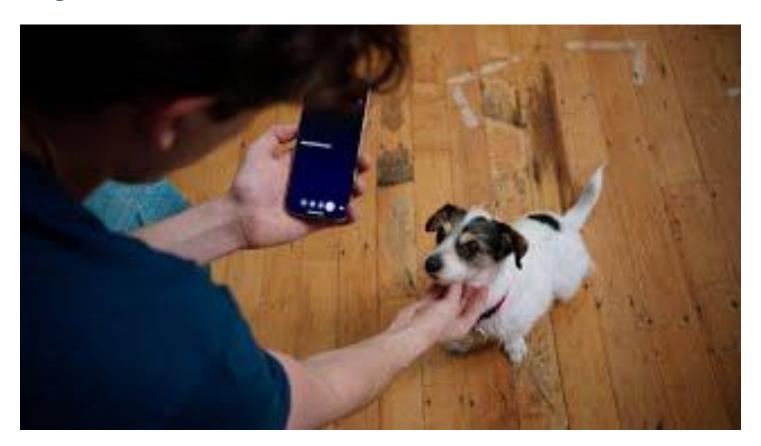
- No standing or parking is from 7AM-9:30AM and 4PM-6:30PM, Monday-Friday.
- * No parking is from 10PM-5AM on Tuesday.

Since it's noon on Tuesday and does not fall within any of the restricted times, you can park here. Just ensure you adhere to any payment requirements and other regulations indicated on the sign.

Al That Sees, Hears, and Speaks: Project Astra



Fixing a Bike





Al Agents

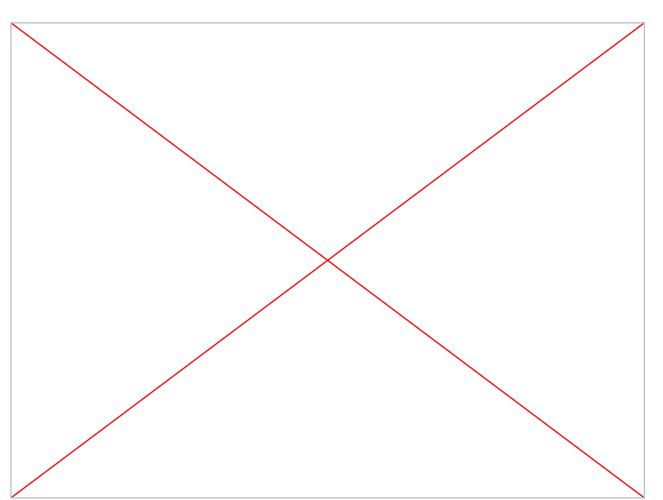
Al agents are systems designed to perform complex tasks autonomously on your behalf.

Unlike conventional programs that follow predetermined scripts, Al agents can:

- Reason Analyze and interpret context and data.
- Plan Strategically select the optimal course of action.
- Act Execute tasks seamlessly through APIs, tools, or interfaces.
- Reflect Assess performance, learn from outcomes, and refine future actions.

Deep Research

Al-powered tools from OpenAl, Google, and Anthropic that autonomously conducts multi-step internet research, analyzing and synthesizing information from online sources to generate comprehensive, cited reports on complex topics.



Example of a Deep Research Prompt

I am the CEO of a Virtual Healthcare Solution Built for Children in the Child Welfare System. I partner with Medicaid to Reduce Costs & Improve Outcomes – Foster youth cost 10x more in Medicaid spending due to reactive care in ERs and psychiatric holds. By partnering directly with MCOs, my company delivers preventive, evidence-based care that reduces crisis interventions and long-term costs.

Objective:

To conduct an in-depth analysis of how state-managed care organizations define eligibility, enroll foster youth and related populations, and manage spending per child in the following states:

Washington (WA), Nevada (NV), Arizona (AZ), New Mexico (NM), South Carolina (SC), Wisconsin (WI), Massachusetts (MA), Rhode Island (RI), Texas (TX), Oklahoma (OK), Missouri (MO), Georgia (GA), Florida (FL), Kentucky (KY), Pennsylvania (PA)

Research Ouestions & Focus Areas:

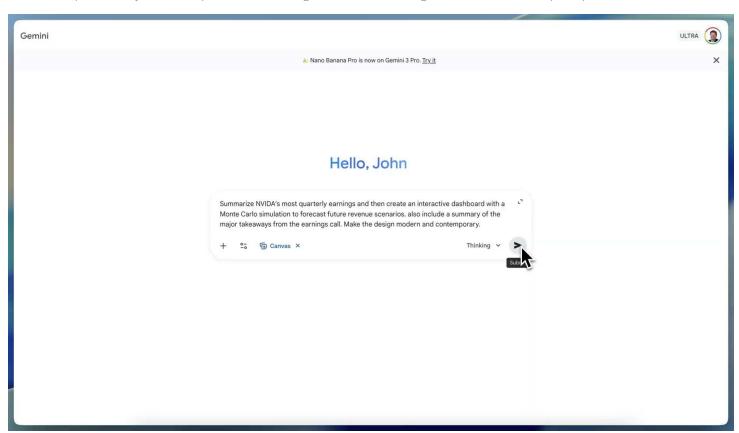
- 1. Eligibility Criteria & Definitions:
 - Detail the most recent eligibility criteria for inclusion in each state's Foster Specialty Plan.
 - Identify the specific categories included:
 - Children in foster care
 - o Foster-adjacent populations (e.g., children adopted out of foster care, youth aged out)
 - Youth on safety or preservation plans
 - o Tribal youth or any other populations that may not traditionally be considered foster
 - Describe how each state defines "foster youth" and any variations in definitions or inclusion criteria.
- 2. Enrollment Data:
 - Gather the latest available enrollment numbers for the Foster Specialty Plan in each state.
 - Provide a breakdown of total enrollees by the various categories (e.g., percentages or absolute numbers for each sub-group).
- 3. Spending Analysis:
 - Estimate the spending per child enrolled under the Foster Specialty Plan.
 - Identify any differences in spending patterns across the different categories of foster youth.

Expected Deliverables:

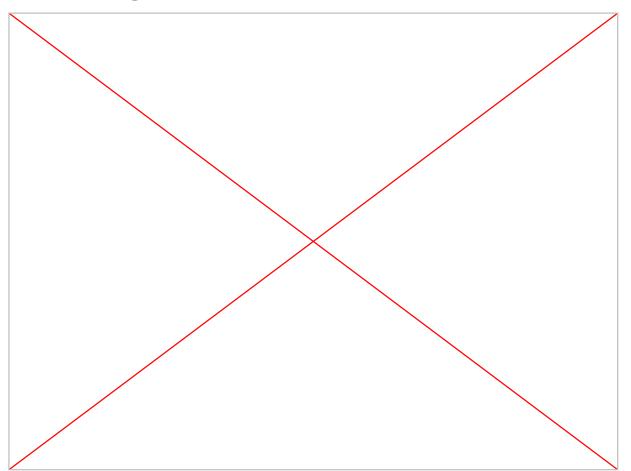
- 1. A detailed profile for each state that covers the above aspects for each state, including the name of the state administrator and a link to the website. The report should be in bullets.
- A section that provides a comparative analysis across states to identify patterns, discrepancies, or innovative approaches in managing foster youth healthcare.
- 3. A summary table that has has the name of the state and columns for eligibility, enrollment, spending, and Here Now Health opportunities.

"Vibe Coding"" Creating Interactive Dashboards

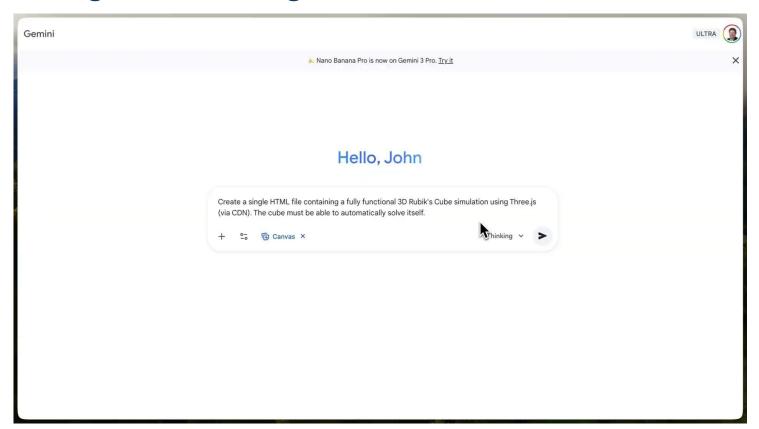
Task: Summarize NVIDA's most quarterly earnings and then create an interactive dashboard with a Monte Carlo simulation to forecast future revenue scenarios. also include a summary of the major takeaways from the earnings call. Make the design modern and contemporary.



Claude Building An App to Analyze Attendance

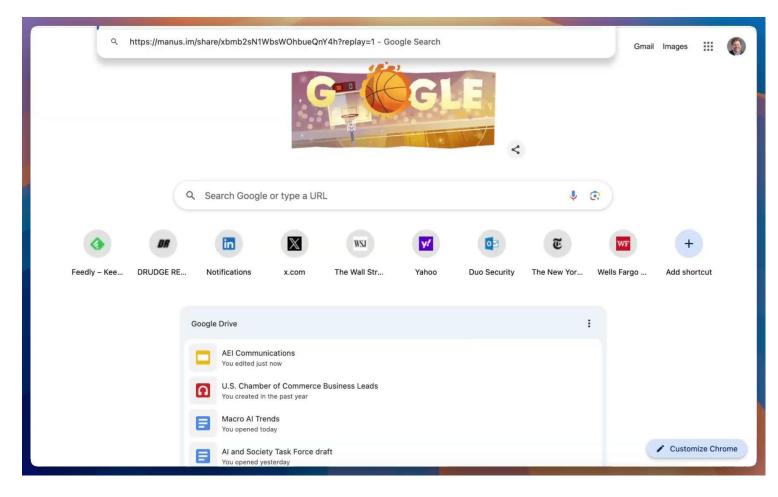


Creating a Self Solving Rubik's Cube



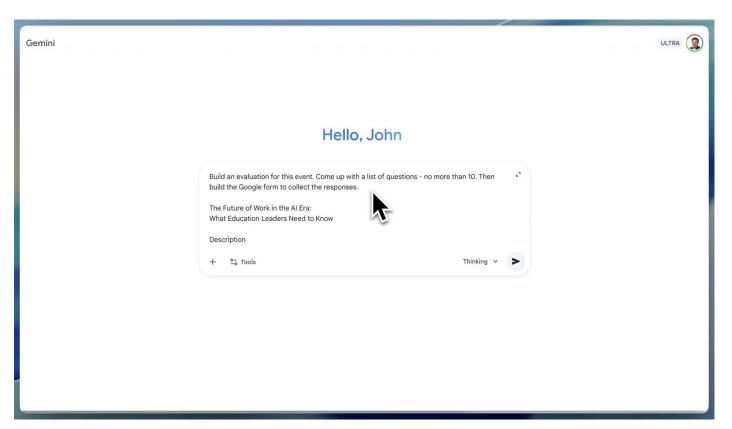
Manus

In this example of an SEO audit, it created a todo list of 34 activities and then published a final report by creating an interactive website.

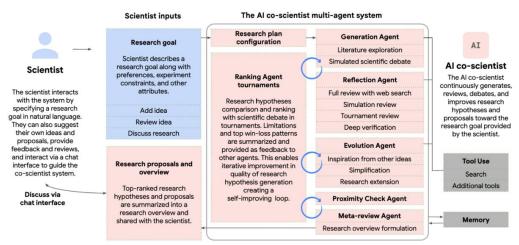


Building An Evaluation

Asked Gemini with Agent to create an evaluation for today's event and then build the form using Google Form.



Example: Google's Co-Scientist



The Al co-scientist system design

Agents:

- **Generation Agent:** Creates initial hypotheses and research ideas.
- **Reflection Agent:** Critically evaluates and provides feedback to refine hypotheses.
- Ranking Agent: Prioritizes hypotheses through competitive assessment.
- **Evolution Agent:** Iteratively improves hypotheses based on feedback.
- **Proximity Agent:** Ensures hypotheses closely align with research goals and context.
- **Meta-Review Agent:** Integrates literature and external knowledge to ground hypotheses.

Operating in dynamic, iterative hypothesis generation, evaluation, and refinement cycles, this system identified previously unknown drug repurposing candidates for acute myeloid leukemia (AML), which were subsequently confirmed through rigorous laboratory experiments. It also proposed novel epigenetic targets for treating liver fibrosis, validated successfully using sophisticated human organoid models. Remarkably, it independently rediscovered unpublished insights into mechanisms behind antimicrobial resistance, underscoring its transformative potential to accelerate scientific progress.

Source: Google



Al That Connects to the Physical World

Midjourney prompt: /imagine Front view, Create a photograph of black Businesswoman pushing digital graph on touchscreen, high-contrast images, beautiful and interesting: emphasize on high resolution. good composition Suitable for a variety of uses such as advertisements, websites. Depicting AI

Robotics



Source: Boston Dynamics: McKinsey

Supply Chain Robotics

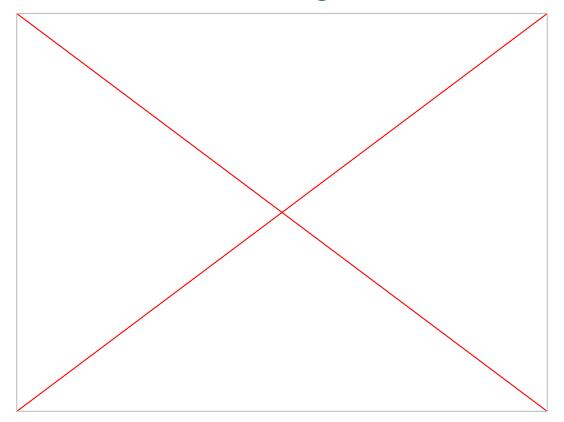




Amazon

Yangshan Automated Port

Autonomous Driving Vehicles







Source: Waymo



Al and the Future of Work

Al Is Shifting The Nature of Work

Al can replace work functions

McKinsey estimates current technologies could technically automate about 57% of US work hours.

SHRM estimates **15% of US employment** already has at least 50% of tasks automated, and 7.8% of jobs do at least half of their work with generative Al tools.

Inside organizations, 82% of senior decision makers now use GenAl at least weekly, and 46% use it daily.

Task compression: **Tasks that take 90** minutes without Al get done in about 18 minutes with it. Average time savings: 80%. Median task value: \$54 in equivalent professional labor.

Some jobs will be displaced, new ones created

38% of Al-adopting companies expect to reskill over 20% of their workforce...

Al could help up-skill workers: MIT researchers had marketing professionals use ChatGPT:

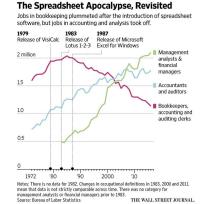
 ChatGPT increased overall productivity, but the greatest gains were among the least skilled workers.

SHRM estimates **63% of jobs have non technical barriers to automation**, such as client preferences, regulation, or cost.

New **hybrid jobs** will emerge that combine domain expertise with new Al technical skills.

We've also seen this before

The adoption of spreadsheets in the 80s/90s led to fewer bookkeepers but fueled a surge in financial managers and accountants.



Workforce Implications

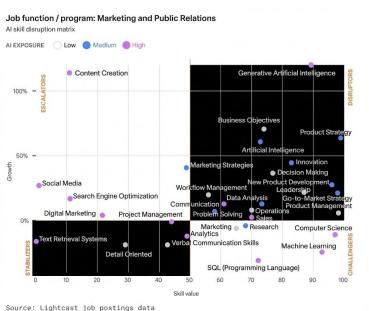
Al adoption has moved beyond tech: Over half of Al-related job postings in 2024 were outside IT and computer science, showing Al is reshaping roles in marketing, HR, finance, education, and more.

Generative Al is driving explosive demand: Job postings mentioning generative Al surged by 800% since 2022, with roles both inside and outside IT requiring these skills.

Al skills mean higher wages: Jobs requiring Al skills offer salaries about 28% higher (\$18,000 more annually) than those without, with premiums even higher when multiple Al skills are required.

Every career area is at a different stage of adoption: Fields like marketing and HR are rapidly increasing Al demand, while education and clerical roles lag, requiring tailored strategies rather than one-size-fits-all approaches.

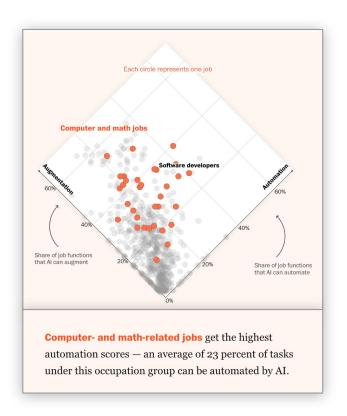
Human skills remain critical: Eight of the top ten most-requested skills in Al-enabled roles are not technical Al skills but human capabilities such as communication, leadership, research, and problem-solving.

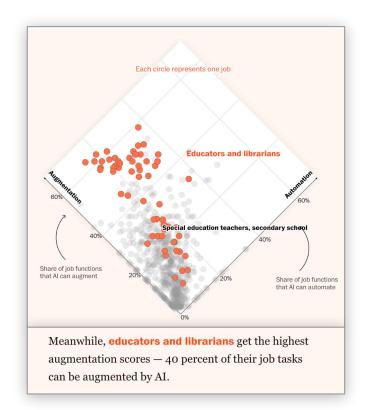


source. Lightcast job postings data

40

Tension Between AI Augmentation and Automating Tasks





Three Big Shifts



Tasks shrink (80% time savings on many cognitive tasks)



Roles shift toward oversight, interpretation, and orchestration/management of people, Al tools, and Al agents.



New workflows emerge built around Al-human teaming

(\) Time Horizon



0-2 years:



Copilots, agents, embedded AI in every suite



30-50% task compression in daily workflows



Agents begin to autonomously run processes (sales, support, IT)



2-5 years:



Full workflow redesign becomes standard



"Hybrid teams" of people + agents across most knowledge roles



Al handles initiation, triage, routing, documentation; humans handle judgment

Al Raises The Bar For Human Skills

Writing & Communication (The New Coding)

Writing is now a technical skill. Al systems respond to clarity, logic, structure, and tone — making strong writing and communication central to unlocking their power.

- Writing is in the top skills used across nearly all occupations (McKinsey).
- Generative AI performs tasks based on how clearly humans express intent.
- "Prompting" is just structured writing: precision, reasoning, and narrative clarity.
- Strong writers outperform with AI because they give better instructions, frame better problems, and evaluate outputs more rigorously.

English is the new coding. Students who can write clearly will wield AI more effectively than those who can merely operate the tools.

Analytical & Mathematical Reasoning

Al accelerates computation, but humans must interpret, validate, and reason.

- Mathematical reasoning is foundational for data-rich fields like healthcare, logistics, finance, engineering.
- Digital + information skills have the highest exposure to change meaning workers will need stronger conceptual understanding, not less.
- Math underpins AI literacy: probability, logic, structure, problem decomposition.

Math remains a core driver of insight, quality control, and responsible use of Al

Human-Centered Skills (The Differentiators)

Most durable skills in an Al era:

- Collaboration & teamwork
- Leadership
- Coaching & mentoring
- Interpersonal communication & empathy
- Adaptability & learning agility
- Problem framing & critical evaluation

Al amplifies technical ability, but human judgment, empathy, and collaboration remain irreplaceable

John Bailey

John Bailey is a cross-sector leader, investor, and operator helping organizations harness emerging technologies to expand opportunity and advance human flourishing. He currently serves as an Advisor to Fiore Ventures, a Fellow at the Chan Zuckerberg Initiative, and a Non-Resident Senior Fellow at the American Enterprise Institute. Across these roles, his work spans healthcare, Al, science, education, and the future of work.

Over the past two decades, John has worked across the public, private, and philanthropic sectors, serving as a White House domestic policy advisor, Deputy Policy Director at the U.S. Department of Commerce, and Director of Educational Technology at the U.S. Department of Education. He has shaped and executed investment strategies for major philanthropies and venture funds, supporting founders and innovations that deliver meaningful and measurable impact.

John advises technology companies and investors on their AI strategies and serves on advisory boards for Trustible.ai, the FPF Center for Artificial Intelligence, Jobs for the Future, the Tech Talent Project, and the XPRIZE Brain Trust. He also serves on the boards of Zearn Math, U.S. Digital Response, American Policy Ventures, the Just Trust, and the Federation of American Scientists. Recognized by Washingtonian magazine as one of Washington's Most Influential People in Policy for four consecutive years, John has also served as an advisor to four presidential campaigns.



