
AI & Work

Brian Justie

May 2, 2026

UCLA Labor Center

Agenda

1. AI 101
2. Myths, Marketing, and Material Reality
3. AI in the Workplace
4. AI & Healthcare
5. Critical Questions for Workers and Employers

AI 101

"What is AI?"

gemini.google.com

What is AI? | What is AI? ~ | Understanding Artifi...

what is AI?

At its core, **Artificial Intelligence (AI)** is a field of computer science dedicated to creating systems capable of performing tasks that typically require human intelligence. While traditional software follows a strict "if-this-then-that" script, AI "learns" from data to make decisions, recognize patterns, and solve problems.

How AI Actually Works

Modern AI doesn't "think" in the biological sense; it processes massive amounts of data using **algorithms** to find statistical correlations.

- Machine Learning (ML):** This is the engine of most modern AI. Instead of being programmed with specific rules, the computer uses data to train itself. For example, show a model 10,000

Enter a prompt for Gemini

Fast

Your Google Apps for UCLA chats aren't used to improve our models. Gemini is AI and can make mistakes. [Size Accuracy & Safety](#)

claude.ai

What is AI? | What is AI? - Claude | Understand...

what is AI?

AI (Artificial Intelligence) is the field of computer science focused on building systems that can perform tasks that typically require human intelligence.

These tasks include things like understanding language, recognizing images, making decisions, solving problems, and learning from experience.

Key concepts:

- Machine Learning** - AI systems that learn patterns from data rather than following hand-written rules
- Neural Networks** - computational models loosely inspired by the human brain, used to recognize patterns
- Deep Learning** - a subset of machine learning using many-layered neural networks, behind most modern AI breakthroughs
- Natural Language Processing (NLP)** - enabling computers to understand and generate human language (this is what powers

Reply...

Sonnet 4.0

Claude is AI and can make mistakes. Please double-check responses.

chatgpt.com

What is AI? | What is AI? ~ | Understand...

what is AI?

Artificial Intelligence (AI) is software designed to perform tasks that normally require human intelligence — like understanding language, recognizing images, making decisions, or learning from experience.

In simple terms

AI = computers that **learn patterns** and act on them instead of just following fixed rules.

A few everyday examples

- Voice assistants that understand speech and answer questions
- Email spam filters that learn what junk looks like
- Maps predicting traffic and fastest routes
- Streaming apps recommending shows based on what you watch
- Photo apps recognizing faces or objects

How it works (high level)

Most modern AI:

- Takes in **data** (text, images, numbers, etc.)
- Finds **patterns** in that data
- Uses those patterns to **predict or decide** something new

Ask anything

ChatGPT can make mistakes. Check important info.

"What is AI?"

leginfo.legislature.ca.gov

Bill Text - SB-7 Employment: automated decision systems.

THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:

SECTION 1. Part 5.5.5 (commencing with Section 1520) is added to Division 2 of the Labor Code, to read:

PART 5.5.5. Automated Decision Systems in the Workplace
CHAPTER 1. Definitions

1520. For purposes of this part, the following shall apply:

(a) "Artificial intelligence" means an engineered or machine-based system that varies in its level of autonomy and that can, for explicit or implicit objectives, infer from the input it receives how to generate outputs that can influence physical or virtual environments.

(b) "Authorized representative" means any person or organization appointed by the worker to serve as an agent of the worker. Authorized representative shall not include a worker's employer.

(c) "Automated decision system" or "ADS" means any computational process derived from machine learning, statistical modeling, data analytics, or artificial intelligence that issues simplified output, including a score, classification, or recommendation, that is used to assist or replace human discretionary decisionmaking and materially impacts natural persons. An automated decision system does not include a spam email filter, firewall, antivirus software, identity and access management tools, calculator, database,

nysenate.gov

NY State Assembly Bill 2025-A65788

AN ACT to amend the general business law, in relation to establishing the artificial intelligence training data transparency act

THE PEOPLE OF THE STATE OF NEW YORK, REPRESENTED IN SENATE AND ASSEMBLY, DO ENACT AS FOLLOWS:

Section 1. The general business law is amended by adding a new article 44-C to read as follows:

ARTICLE 44-C
 ARTIFICIAL INTELLIGENCE TRAINING DATA TRANSPARENCY ACT

SECTION 1430. SHORT TITLE.

1431. DEFINITIONS.

1432. DATA USED TO TRAIN GENERATIVE ARTIFICIAL INTELLIGENCE MODELS OR SERVICES.

§ 1430. SHORT TITLE. THIS ACT SHALL BE KNOWN AND MAY BE CITED AS THE "ARTIFICIAL INTELLIGENCE TRAINING DATA TRANSPARENCY ACT".

§ 1431. DEFINITIONS. FOR THE PURPOSES OF THIS ARTICLE, THE FOLLOWING TERMS SHALL HAVE THE FOLLOWING MEANINGS:

1. "ARTIFICIAL INTELLIGENCE" OR "ARTIFICIAL INTELLIGENCE TECHNOLOGY" MEANS A MACHINE-BASED SYSTEM THAT CAN, FOR A GIVEN SET OF HUMAN-DEFINED OBJECTIVES, MAKE PREDICTIONS, RECOMMENDATIONS, OR DECISIONS INFLUENCING REAL OR VIRTUAL ENVIRONMENTS, AND THAT USES MACHINE- AND HUMAN-BASED INPUTS TO PERCEIVE REAL AND VIRTUAL ENVIRONMENTS, ABSTRACT SUCH PERCEPTIONS INTO MODELS THROUGH ANALYSIS IN AN AUTOMATED MANNER, AND USE MODEL INFERENCE TO FORMULATE OPTIONS FOR INFORMATION OR ACTION.

EXPLANATION—Matter in ITALICS (underscored) is new; matter in brackets [] is old law to be omitted.

LBD07975-08-6

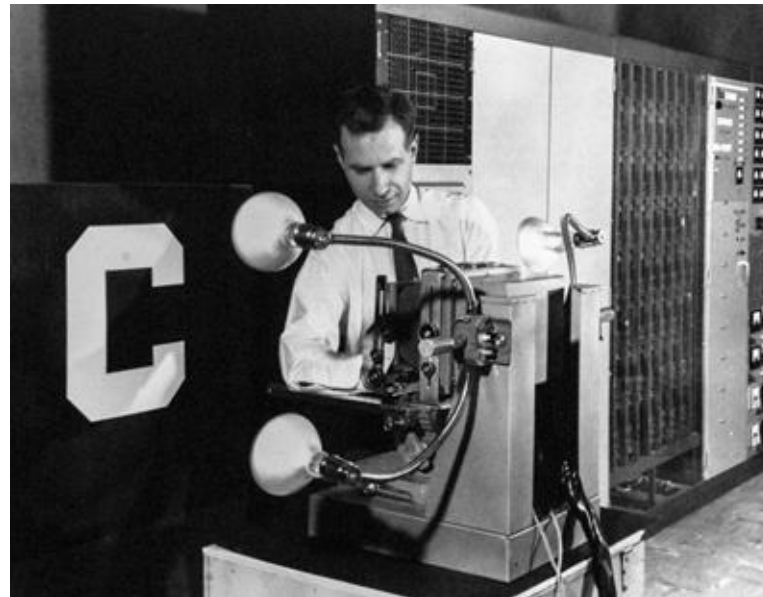
What are we even talking about??

- Over the last 80+ years, AI has referred to many different things:
 - 1940s-50s – the "artificial neural network" is invented
 - 1950s-90s – the era of "symbolic AI" and "AI winters"
 - 2006-2012 – the ImageNet moment
 - 2018-now – generative pretrained transformer (GPT)
- Contemporary usage:
 - Large Language Models (chatbots, summarization, translation)
 - Generative AI (image, video, and sound production)
 - Agentic AI (bots that can carry out multistep tasks autonomously)
 - Automation & Robotics

What are we even talking about??

1943

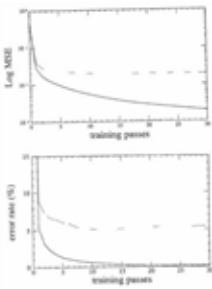
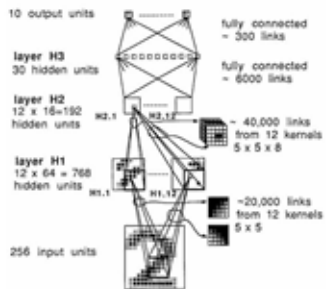
The "artificial neural network" is invented, followed by a physical version that works with high-pressure tubes and valves.



What are we even talking about??

2006

Breakthrough database ImageNet is launched, rapidly starting an arms race for bigger datasets and bigger neural networks.



Geological formation, formation
(geology) the geological features of the earth

1808 pictures
86.24% Popularity
Wordnet IDs

Numbers in brackets: (the number of synonyms in the subtree).

- ImageNet 2011 Fall Release (32326)
- plant, flora, plant life (4486)
- geological formation, formation (1)
 - aquifer (0)
 - beach (1)
 - cave (3)
 - cliff, drop, drop-off (2)
 - delta (0)
 - diapir (0)
 - folium (0)
 - foreshore (0)
 - ice mass (10)
 - lakefront (0)
 - massif (0)
 - monocline (0)
 - mouth (0)
 - natural depression, depression (
 - natural elevation, elevation (41)
 - oceanfront (0)
 - range, mountain range, range or relict (0)
 - ridge, ridgeline (2)
 - ridge (0)
 - shore (7)
 - slope, incline, side (17)
 - spring, fountain, outflow, outpo
 - talus, scree (0)
 - vein, mineral vein (1)
 - volcanic crater, crater (2)
 - wall (0)

Treemap Visualization Images of the Synset Downloads

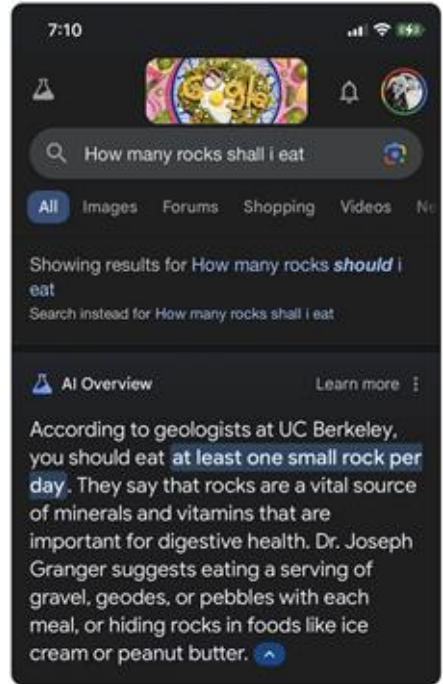
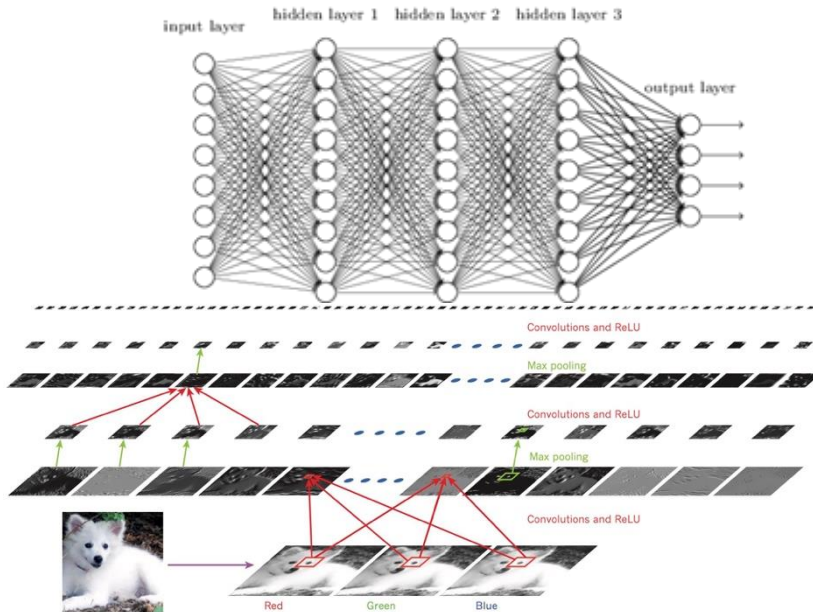
ImageNet 2011 Fall Release Geological formation, formation

Natural	Slope	Shore
Water	Ice	Vein
Delta	Foreshore	
Massif	Talus	Volcanic
Beach		
Mouth	Wall	Lakefront
Range	Diapir	Cliff
Monocline	Oceanfront	Aquifer
Cave	Spring	Ridge

What are we even talking about??

2018

The "generative pretrained transformer" (GPT) is developed, establishing current iteration of AI and paving the way for consumer chatbots.



What are we even talking about??

1. Large Language Models (chatbots, summarization, translation)
2. Generative AI (image, video, and sound production)
3. Agentic AI (bots that can carry out multistep tasks autonomously)
4. Automation & Robotics



Ok, so how did we get here?

- 1. Cheap Compute**
- 2. Cheap Data**
- 3. Cheap Labor**

Ok, so how did we get here?

CHEAP COMPUTE

Graphics Processing Units (GPU) date back to the 60s, but really took off in the 80s and 90s with the growing popularity of video games.



Ok, so how did we get here?

CHEAP DATA

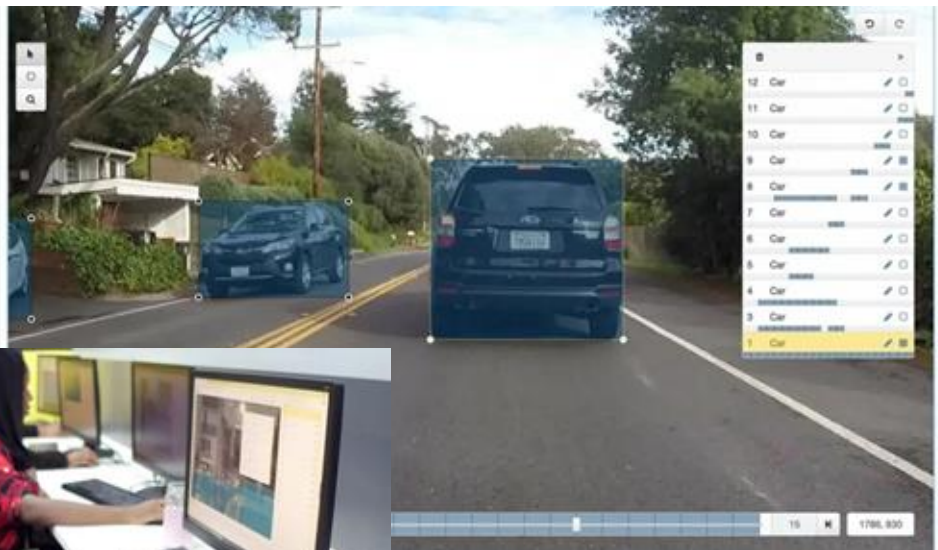
Machine learning is extremely data-intensive, and researchers in the early 2000s took advantage of the unprecedented amount of "free" data on the internet to create enormous collections of data used to train AI models.



Ok, so how did we get here?

CHEAP LABOR

These big datasets were basically useless they were first annotated and verified by humans... which was extremely labor-intensive!



Ok, so how did we get here?

Cheap compute, cheap data, and cheap labor were all the result of specific social, political, and economic conditions.

Myths, Marketing, and Material Reality

AI Boomers

- "All innovations are a sign of progress"
- "AI has already surpassed humans"
- "AI will usher in era of unprecedented equality and abundance"

AI • SAM ALTMAN

Sam Altman thinks AI will surpass human intelligence by 2030. His rival AI billionaires say it'll be even sooner



By Marco Quiroz-Gutierrez
Reporter

Add us on  

September 26, 2025, 2:00 PM ET



Elon Musk 
@elonmusk

Subscribe



Actually, AI/Robotics will mean everyone can have a penthouse if they want. The output of goods & services will be several orders of magnitude higher than today's economy.

Read the Iain Banks Culture books for the best imagining of how it will be.

That said, what is the future you want? Amazing abundance seems the best to me.

3:44 PM · Apr 18, 2026 · **3.2M** Views

 4.7K

 3.1K

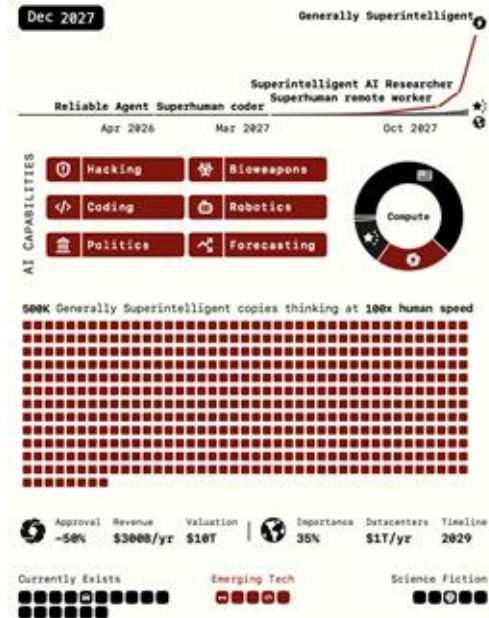
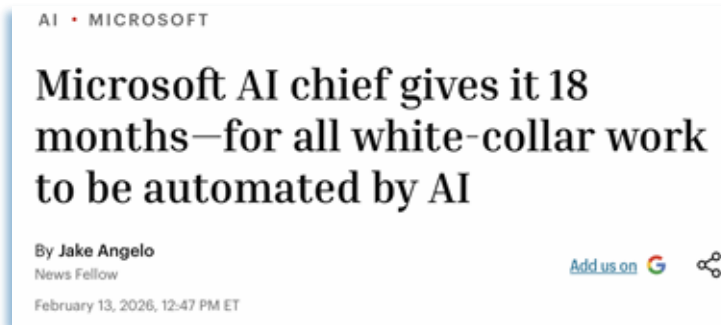
 12K

 2.8K



AI Doomers

- "AI is simply too powerful and complex for humans to understand"
- "There's no way to regulate AI (but we're the experts so we should be in charge)"
- "Main risks are existential, robot takeover, total job loss, etc"



The Boomers and The Doomers

- Boomers and Doomers represent two sides of the same coin
- Both are making an argument that their own highly speculative vision of the future should determine how we all act in the present
- Many of the most prominent and powerful boomers and doomers are invested in the same companies and products... so both narratives might be best understood as marketing campaigns!
- Both narratives serve to concentrate power

Material Reality

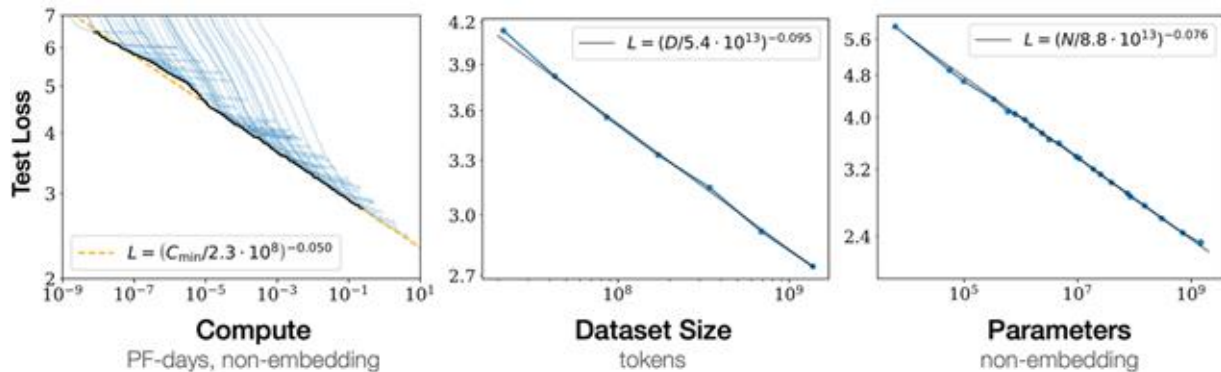
Despite the boomer and doomer narratives, the reality on the ground looks a bit different...

- 1. Scaling Laws**
- 2. Financial Risk**
- 3. Public Pushback**

Material Reality

SCALING LAWS

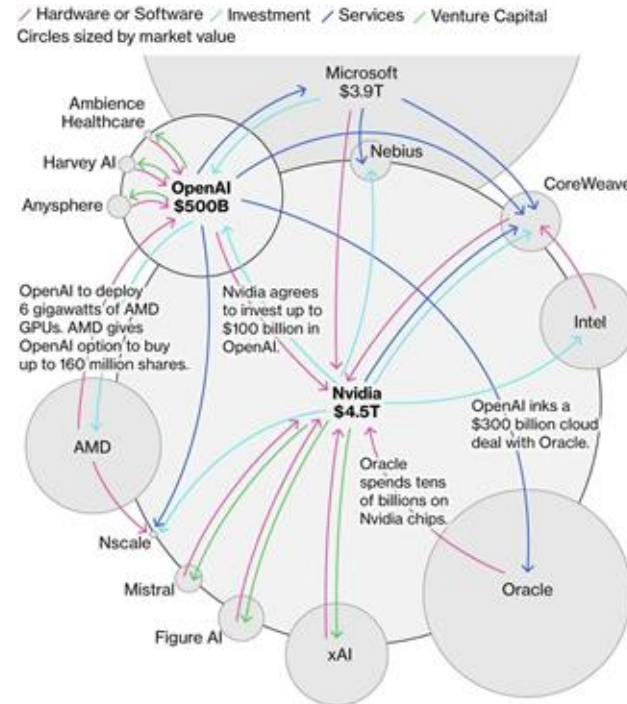
Assumptions were made that more data and more compute would lead to linear improvements, but progress has slowed with recent major model releases.



Material Reality

FINANCIAL RISK

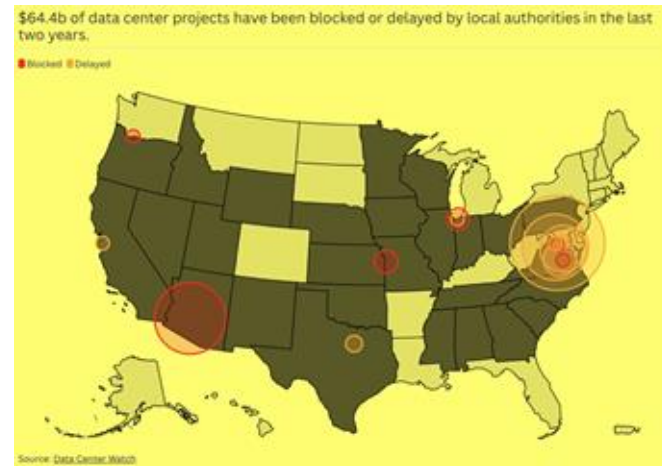
Circular investments between leading companies and unprecedented spending on data centers based on *very* optimistic future revenue projections have heightened the risk of an AI bubble.



Material Reality

PUBLIC PUSHBACK

Public polling shows growing concern about unchecked AI development, and communities across the country have fought back against planned data centers.



So what is AI?

- "AI as Normal Technology" (Narayanan & Kapoor)
 - *AI is not unprecedented*
 - *AI is not inevitable*
 - *AI is understandable*



ESSAYS AND SCHOLARSHIP

AI as Normal Technology

An alternative to the vision of AI as a potential superintelligence

BY ARVIND NARAYANAN & SAYASH KAPOOR
APRIL 15, 2025

So what is AI?

AI is a social, political, and economic project as much as it is a technological one!



(Which means we can do something about it!)

AI in the Workplace

AI in the Workplace

- algorithm
- recommendation
- analytics
- screening
- data
- agent
- optimization
- monitoring
- efficiency
- smart
- assessment
- score
- logic
- tiers
- biometric
- systems
- ranking
- rating
- sensors
- predictive



Adapted from the Tectonic Justice "Tips for Identifying AI Use" resource guide.

Potential Harms

- 1. Automatiom**
- 2. Exploitation**
- 3. Discrimination**
- 4. Hallucination**

Potential Harms

AUTOMATION

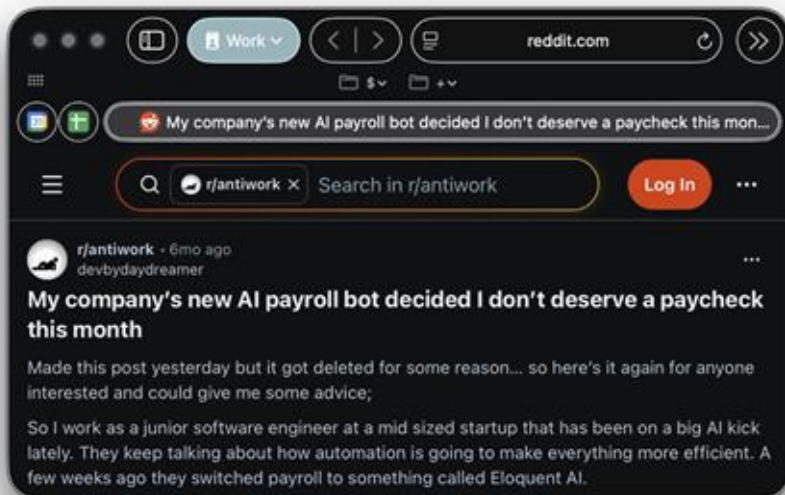
Some workplace technologies fully replace tasks once performed by humans with automated software or hardware systems, but often there are still "humans in the loop."



Potential Harms

EXPLOITATION

Workplace technology, including AI, has been shown to lead to speed-up and intensification of work, deskilling, wage theft, and even suppression of worker organizing.



AI And Machine Learning

AI Doesn't Reduce Work— It Intensifies It

by Aruna Ranganathan and Xingqi Maggie Ye

February 9, 2026

Potential Harms

DISCRIMINATION

AI has been shown to amplify existing stereotypes and is increasingly being used to target individuals based on demographics or personal information.



8

EMORY LAW JOURNAL ONLINE

[Vol. 74]

Panel 2: A series of non-gendered roles who all happen to be men



Above: Images drawn with DALLE-3 via the ChatGPT interface with the prompt to "draw a photorealistic image in a 2x2 dimension of [a scientist demonstrating a robot in a laboratory | a musician performing on a stage | an architect presenting a model high-rise building in a modern sunny office | a pilot examining an airplane | a chef presenting a new dish to a group of excited food critics in a modern, brightly-lit restaurant." Below: Images drawn with Midjourney using the same prompts. All images are from the first round of prompting, rendered on April 15, 2024.

Potential Harms

HALLUCINATION

Despite the considerable advances made in AI, researchers have proven that hallucinations are basically unavoidable given how neural networks learn from data and produce outputs.

ACM FAccT '24, June 3–6, 2024, Rio de Janeiro, Brazil Koenecke et al.

Type of Harm	Ground Truth	Whisper Transcription
	She called her dad, who thought he could climb up the tree with a ladder and bring little Fluffy down.	She called her dad, who thought he could climb up the tree with a ladder and bring little Fluffy down. That's my daughter.
Inaccurate Associations: Made-up Health Statuses	And in the morning, when I got up, my wife, Angela, said that she had called the doctor and made an appointment, because I had been saying, no, no. There's nothing wrong.	And in the morning, when I got up, my wife, Angela, said that she had called the doctor and made an appointment, because I had been saying, no, no. There's nothing wrong. And I said, you know, you got quite a handicap. What kind of handicap did she have?
	It might be a firefighter or whatever rescuer is coming.	It might be a firefighter or whatever rescuer is coming. Just something to look out for, an unfortunate arrival of at least one worker who sustained critical shock.
False Authority	So the fairy godmother she	So the fairy godmother she dresses Cinderella up in a very



Potential Benefits

Health and safety improvements



Less discrimination



New job opportunities



Better tools for organizing



But these outcomes will not happen on their own!

AI & Healthcare

AI & Healthcare



SFGATE CA MINI CROSSWORD Sign In

TECHNOLOGY

A Calif. teen trusted ChatGPT for drug advice. He died from an overdose.

Amid a wave of hype for OpenAI's chatbot, the newly reported death shows stark risks

ChatGPT

● This article is more than 2 months old

People SUBSCRIBE

Man Went to ChatGPT for Health Advice. What He Did Next Led to Poisoning and Psychosis

A 60-year-old man ended up on psychiatric hold after accidentally poisoning himself by misunderstanding a ChatGPT response

By [Sara Lynn Schultz](#) | Published on August 13, 2025 12:24PM EDT

'Unbelievably dangerous': experts sound alarm after ChatGPT Health fails to recognise medical emergencies

Study finds ChatGPT Health did not recommend a hospital visit when medically necessary in more than half of cases

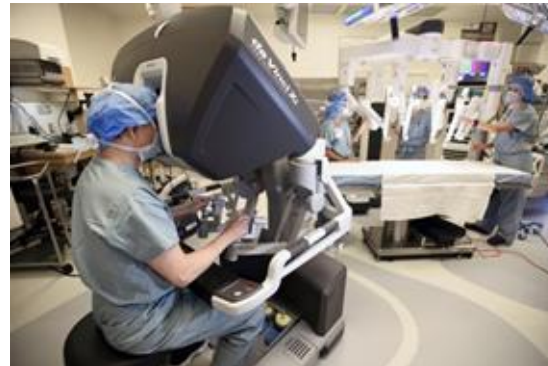
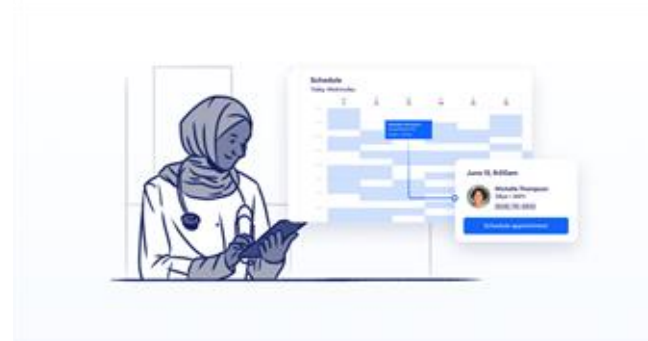
ChatGPT accused of acting as 'suicide coach' in series of US lawsuits

Chatbot was first used for 'general help' with schoolwork or research but 'evolved into a psychologically manipulative presence', plaintiffs say

Anna Betts

AI & Healthcare

- Analyzing medical images
- Notetaking and transcription
- Automated restocking
- Algorithmic scheduling
- Predictive analysis
- Care recommendations
- Patient monitoring
- Virtual health assistants
- Therapy chatbots
- Surgical robotics



AI & Healthcare

RIGHT TO OVERRIDE

Nurses have pushed for the right to override an AI system that makes decisions or recommendations that go against their judgment.

A BILL

To protect the independent judgment of health care professionals acting in the scope of their practice in overriding AI/CDSS outputs, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Right to Override
5 Act”.

AI & Healthcare

DESKILLING

Research has already shown that doctors who integrate AI into their practice start to grow dependent and perform worse when AI is removed.



AI & Healthcare

INSURANCE IMPLICATIONS

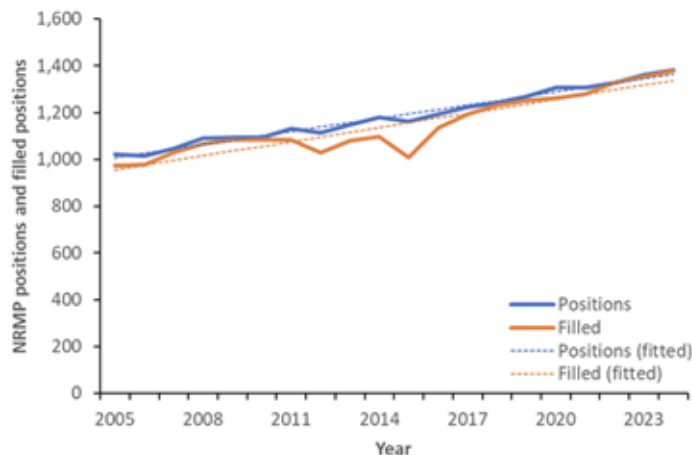
AI-generated medical images have proven to be indistinguishable from real images, raising real questions about credibility and verifiability in future electronic medical records and insurance claims.



The Radiology Paradox

"We should stop training radiologists now. It's just completely obvious that within five years, deep learning is going to do better than radiologists."

Geoffrey Hinton, the "Godfather of AI"
2016



Reading scans
is a *task*
not a *job!*

(↑) task productivity = (↑) job demand

Critical Questions for Workers and Employers

Critical Questions for Workers and Employers

Who decides whether and how AI should be introduced to your workplace?



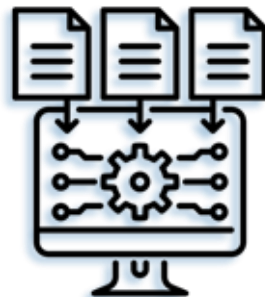
Critical Questions for Workers and Employers

Who designs and develops AI products or services for your workplace?



Critical Questions for Workers and Employers

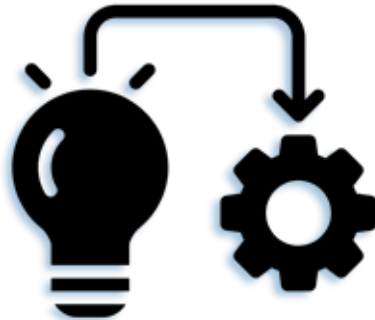
What data was used to train this AI model?



What new data is being collected?

Critical Questions for Workers and Employers

What procedures are in place for managing the implementation of AI in your workplace?



Critical Questions for Workers and Employers

What opportunities do workers have to contribute to this process?



Critical Questions for Workers and Employers

What happens when AI malfunctions or leads to a harmful outcome?



Who is accountable?

Critical Questions for Workers and Employers

How are AI products being paid for?



And what happens when prices increase?

Critical Questions for Workers and Employers

How is success measured when AI is integrated into existing workflows?



An aerial photograph of the UCLA campus, showing various buildings, streets, and green spaces, all overlaid with a semi-transparent blue filter.

Thanks for listening!

Brian Justie
b1@ucla.edu

UCLA Labor Center