AI and the Future:

The Impact of AI in Our Lives

JONES COLLEGE OF BUSINESS

(35s)

Video generated by Mid Journey and D-ID.

Agenda

- Introduction
- Mankind – A Story Of Adaptability
- AI Reality Check
- AI Definitions
- AI Quick Preview
- AI Evolution
- What Makes AI Different
- Ethics and Legal issues
- Workforce Implications
- How Can Businesses Prepare

Mankind: A Story of Adaptability & Evolution

(video)

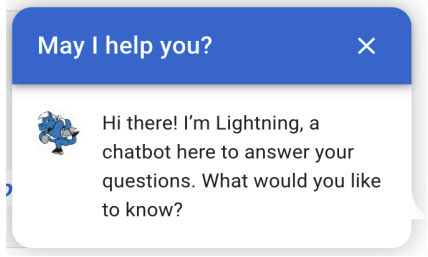
https://www.youtube.com/@SparkDocs

(2m 15s)

Where is AI now?

Reality Check
What you're looking for has been here the whole time…

Autonomous Vehicles

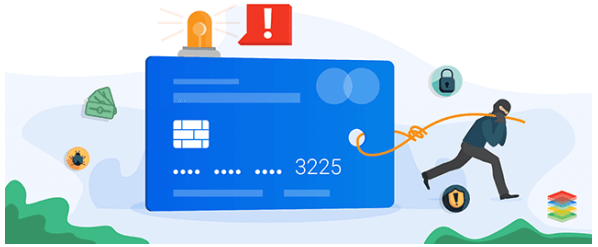


Chatbots

Computer Vision (CV)
Robotics and Automation
Natural Language Processing (NLP)
Machine Learning (ML)
Generative AI

Digital Assistants

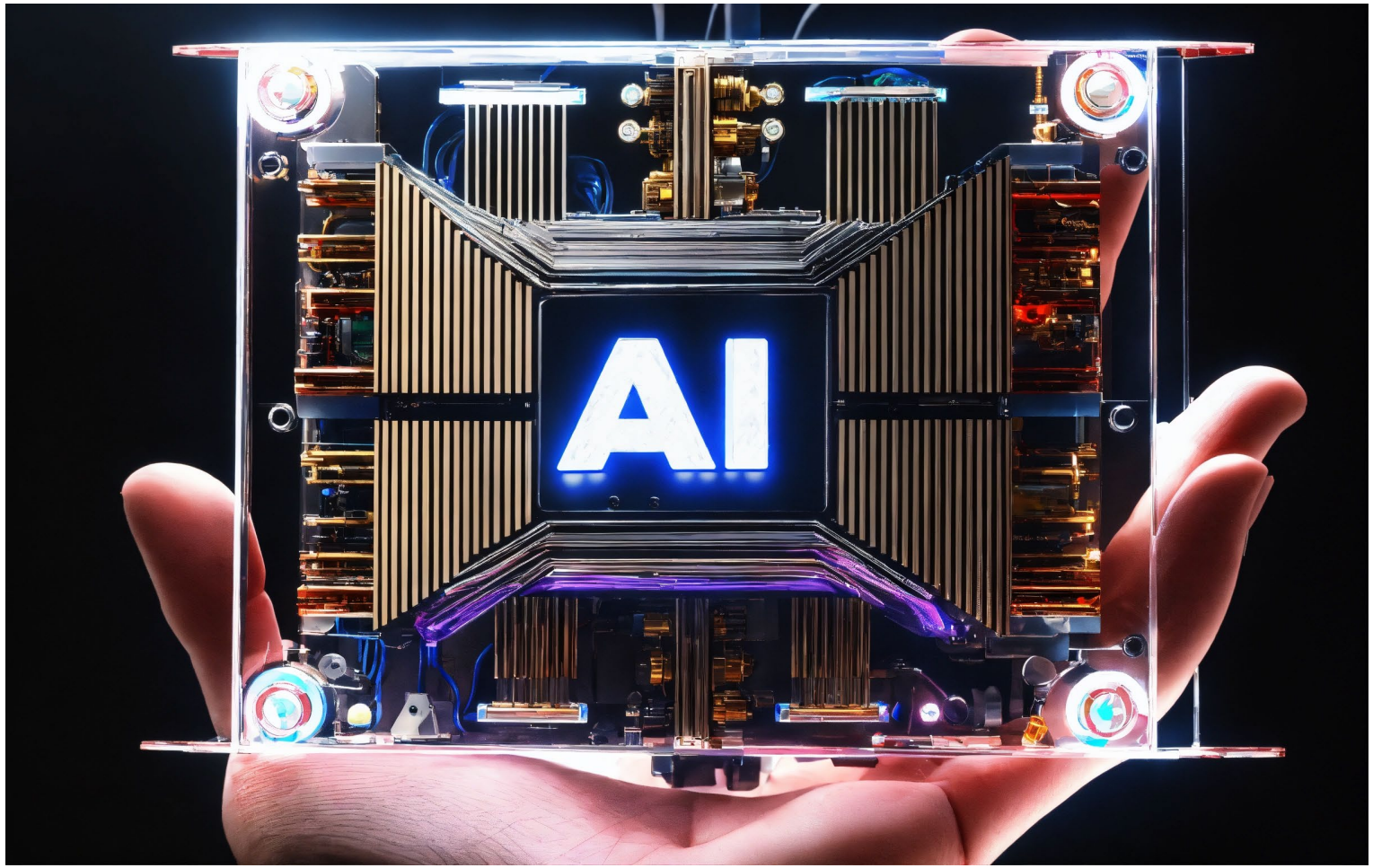
ChatGPT



Fraud Detection

https://www.arrow.com/en/research-and-events/articles/the-history-of-self-driving-cars#
https://www.chronicle.com/article/chatgpt-is-already-upending-campus-practices-colleges-are-rushing-to-respond
https://www.nytimes.com/2022/09/02/technology/ai-artificial-intelligence-artists.html

What is AI?



AI Definitions

Artificial intelligence (AI) is the field of computer science dedicated to creating systems that mimic human cognitive abilities, such as learning, reasoning, and problem-solving. Through algorithms and data analysis, AI enables machines to perceive their environment, make decisions, and adapt to changing circumstances. [ChatGPT]

Artificial General Intelligence Artificial general intelligence (AGI) is a theoretical form of AI with the remarkable ability to understand, learn, and apply knowledge across various tasks and domains. Unlike specialized or narrow AI, which excels at solving specific problems, AGI aims to achieve a level of cognitive function comparable to that of humans.
[Artificial general intelligence – Wikipedia]

Generative AI creates content that resembles human-generated content. The best-known tools create written content, but as the technology has evolved, generative AI tools can now create **text, images, sound,** or even **entire applications.** [Bill Gates]

AI is NOT sentient

It lacks awareness and cannot perceive or understand human thoughts or emotions.[**3**] [Bill Gates]

AI Preview

There are many AI resources and tools available. We will take a “quick” look at some today:

AI Resources

TO LIVE DEMO

The Evolution of AI (video)

(video)

(2m 5s)

AI Evolution: A long time coming

Foundational Blocks

Early Foundation

17th Century: modern calculus foundation develops

18th Century: Probability theory develops, becoming a central pillar of AI

Mimic

Birth of AI

1950: Alan Touring publishes the paper proposing the touring test as a measure of machine intelligence

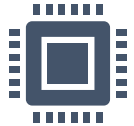
1950: John McCarty coins the term “Artificial Intelligence”

1956: First AI program Logic Theorist proves mathematical theorems

1960: Early Expert Systems emerge

1966: ELIZE, the first chatbot program created, simulates a psychotherapist

Learn



Machine Learning Birth

1982: Japan project to create “intelligent” computers.

1985s: Rise of machine learning techniques (decision trees, neural networks)

1990: The Internet revolutionizes communication and data sharing

1990s: Researchers began grappling with large-scale data processing

1997: Deep Blue defeats chess world champion Garry Kasparov

Predict

Create

Modern AI Birth

2006: ImageNet project stats to train AI image models

2011: IBM Watson, wins Jeopardy, demonstrating progress in natural language processing

2012: AlexNet, a deep learning model sparks deep learning evolution

2016: AlphaGo. a deep learning program beats GO world champion

2020: AI Advances in machine translation, robotics, and medicine

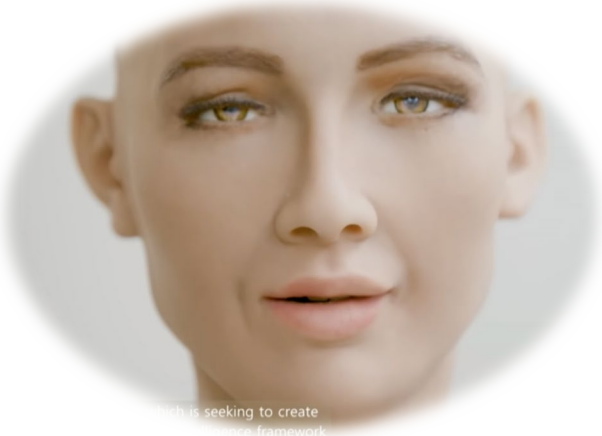
2021: AI-powered virtual assistants like Siri, Alexa, and Google Assistant become ubiquitous, integrating AI into everyday life.

2022: ChatGPT, a Generative-Text Artificial Intelligence chatbot, is released

https://www.fticonsulting.com/insights/articles/fourth-ai-inflection

Sources: Gemini (Google), ChatGPT, Microsoft Copliot)

AI Tech Examples



AI impacts many areas...

Robotics

- Autonomous robots. ★
- Robotic process automation (RPA) ★
- Surgical robots ★
- Drones and UAVs

Healthcare

- Disease diagnosis and prognosis ★
- Drug discovery
- Health monitoring and wearables ★
- Radiology and medical image analysis

Automotive Industry

- Autonomous vehicles ★
- Driver assistance systems ★
- Predictive maintenance
- Traffic management

Music Industry ★

- Composition and generation ★
- Recommendation & discovery
- Tagging & metadata generation
- Production & Remixing
- Enhancement
- Analysis & classification
- Education, Analysis, etc.

Source: ChatGPT

What makes AI different

- Ubiquitous
- Accessibility - openness
- Multitalented - Wider Impact
- Lower Cost of Entry - Easy of use
- Democratization - Fast Adoption Rate
- Learning Capability – Growing data availability
- Increasing Compute Power
- Social Change/Acceptance

AI Impact on Accounting

Can ChatGPT Pass the CPA Exam?

"The earlier Version 3.5 averaged a score of just 53.1 out of 100 and was unable to pass any section of the exam, while the latest Version 4.0 averaged a score of 85.1 and passed all four sections. In its best section, auditing and attestation (AUD), the chatbot got a score of 87.5.2Social Science Research Network. " Mack Wilowsky, May 2023

https://www.investopedia.com/chatgpt-passes-cpa-exam-on-second-attempt-7501615#

Can ChatGPT Pass the CMA Exam?

"ChatGPT answered all five practice questions correctly and provided detailed explanations for its reasoning. It even showed its work on the required calculations…" Blake Oliver, August 2023.

https://www.blakeoliver.com/blog/can-chatgpt-pass-the-cma-exam

How can AI help Accounting?

- **Automating tasks**: AI can automatically classify transactions, reconcile accounts, and generate financial reports, allowing accountants to focus on more complex tasks such as strategic financial planning and analysis. 1 2 4
- **Fraud detection**: AI can identify patterns and anomalies that suggest accounting fraud, which can help businesses save money and improve their financial reports' accuracy and timeliness 2 6
- **Predictive financial analysis**: AI can analyze financial data and provide insights to help businesses make better decisions 6
- **Budgeting and forecasting**: AI can help with budgeting and forecasting by analyzing historical data and identifying trends 6
- **Tax compliance**: AI can help with tax compliance by analyzing financial data and identifying potential tax issues 6
- **Document management**: AI can help with document management, enabling auditors to locate and access relevant financial records and data easily 6
- **ChatCPA**: Chat with a bot trained by CPAs 6

Perplexity.ai: How AI helps the accounting profession

AI in Accounting Software

ZENI.AI: ZENI.AI is an AI-powered accounting software designed to help small and medium-sized businesses manage their financial operations [a]

Docyt: Docyt is an AI-powered accounting automation software platform that enables faster decision-making by automating tedious tasks like data entry, invoice processing, and financial statement preparation [b]

Xero: Xero is an AI-powered accounting software that automates tasks such as bank reconciliation, invoicing, and expense claims [c]

QuickBooks: QuickBooks is an AI-powered accounting software that automates tasks such as data entry, invoicing, and expense tracking [c]

Sage Intacct: Sage Intacct is an AI-powered accounting software that automates tasks such as accounts payable, accounts receivable, and general ledger [d]

AI-powered accounting software collects data from invoices, bills, receipts, and financial statements and analyzes this data using machine learning algorithms to identify patterns in the data, which are used for a wide range of applications such as budgeting decisions and cost optimization. [e]

Perplexity.ai: AI-powered accounting software available in the market

(video)

Will AI Replace Accountants?

(4m)

https://www.youtube.com/@accountantsperspective

Activity (3m)

What are your thoughts about AI's impact for the accounting profession?

The Future?

AI Voices: On AI's Potential

"The development of AI is as fundamental as the creation of the microprocessor, the personal computer, the Internet, and the mobile phone. ***It will change the way people work, learn, travel, get health care, and communicate with each other.*** *Entire industries will reorient around it. Businesses will distinguish themselves by how well they use it."* - Bill Gates, https://www.gatesnotes.com/

https://www.gatesnotes.com/The-Age-of-AI-Has-Begun

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AI Voices: On Impact & Dangers

"*Success in creating AI would be the biggest event in human history. Unfortunately, it might also be the last,* ***unless we learn how to avoid the risks.***" - –
Stephen Hawking, Theoretical Physicist, Cosmologist, and Author

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AI Voices: On Regulation

*"I'm increasingly inclined to think that there should be some **regulatory oversight**, maybe at the national and international level, just to make sure that we don't do something very foolish. I mean, with artificial intelligence, we're summoning the demon."* – Elon Musk

AI Ethical & Legal Issues

We are currently exploring ways to implement AI in a responsible and beneficial manner.

There are **RISKS**

- Copyright and Intellectual Property
- Privacy
- Ethical Issues - Fair Use - Misinformation
- Lawsuits
- Sustainability
- Worker displacement

There is a need for **transparency** from all parties
Develop an understanding of the correct use

Governments and stakeholders are working on a response

AI Regulatory Issues

The **Artificial Intelligence Act approved by the EU (2023)**, categorizes AI applications into three risk levels.

- Unacceptable Risk
- High Risk
- Low Risk

Applications creating unacceptable risks or high-risk applications are subject to specific legal requirements, while others are largely unregulated.

- It bans certain AI practices, such as social scoring systems, considered unacceptable risk. [2]
- It imposes strict requirements on high-risk AI systems in areas like employment, education, and law enforcement. [3]
- The AI Act positions Europe to lead globally in regulating AI and aims to boost innovation while protecting fundamental rights. [4]
- Companies must ensure compliance with the AI Act's requirements, which may involve significant changes in their AI systems and processes. [6]

The US House banned from using AI

https://artificialintelligenceact.eu/

AI Lawsuits

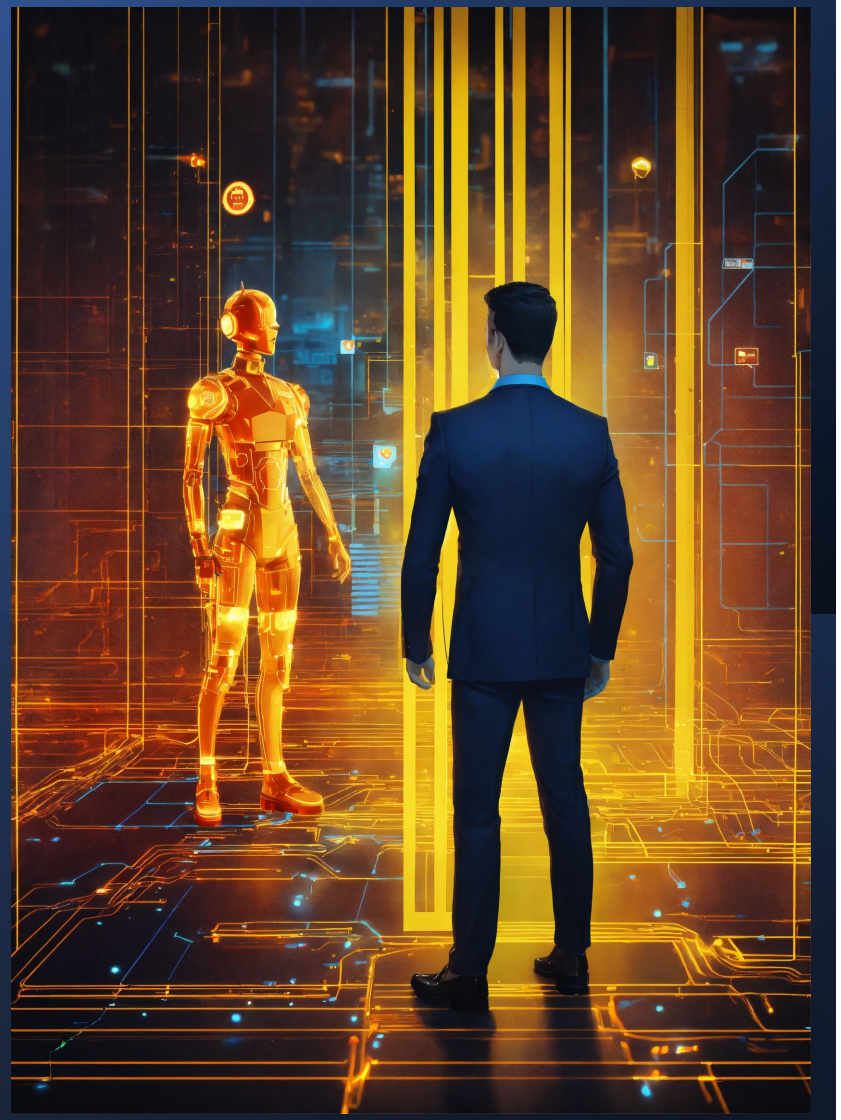
New York Times sues OpenAI for Using Its Stories to Train Chatbots

Microsoft, OpenAI sued for copyright infringement by nonfiction book authors in class action claim

ChatGPT is violating Europe's privacy laws, Italian DPA tells OpenAI

Generative AI Lawsuits Timeline: Legal Cases vs. OpenAI, Microsoft, Anthropic, Nvidia and More

AI and Jobs



"We're going to see tremendous **occupational shifts**. Some jobs will climb while others decline. So **how do we enable and support workers as they transition** from occupation to occupation? We don't do that very well. I worry about the skill shifts. Skill requirements are going to be substantial and how do we get there quickly enough?"

James Manyika, Chairman and Director, **McKinsey Global Institute** (MGI)

"Our research says that 50% of the activities that we pay people to do can be automated by adapting currently demonstrated technologies. We think **it'll take decades**, but it will happen. So, **business leaders have a role to play in trying to understand how to redeploy talent**. It's important to think about mass redeployment instead of mass unemployment. That's the right problem to solve."

Michael Chiu, Partner, **McKinsey Global Institute** (MGI)

https://rpamaster.com/7-inspiring-quotes-on-ais-impact-on-the-future-of-work/

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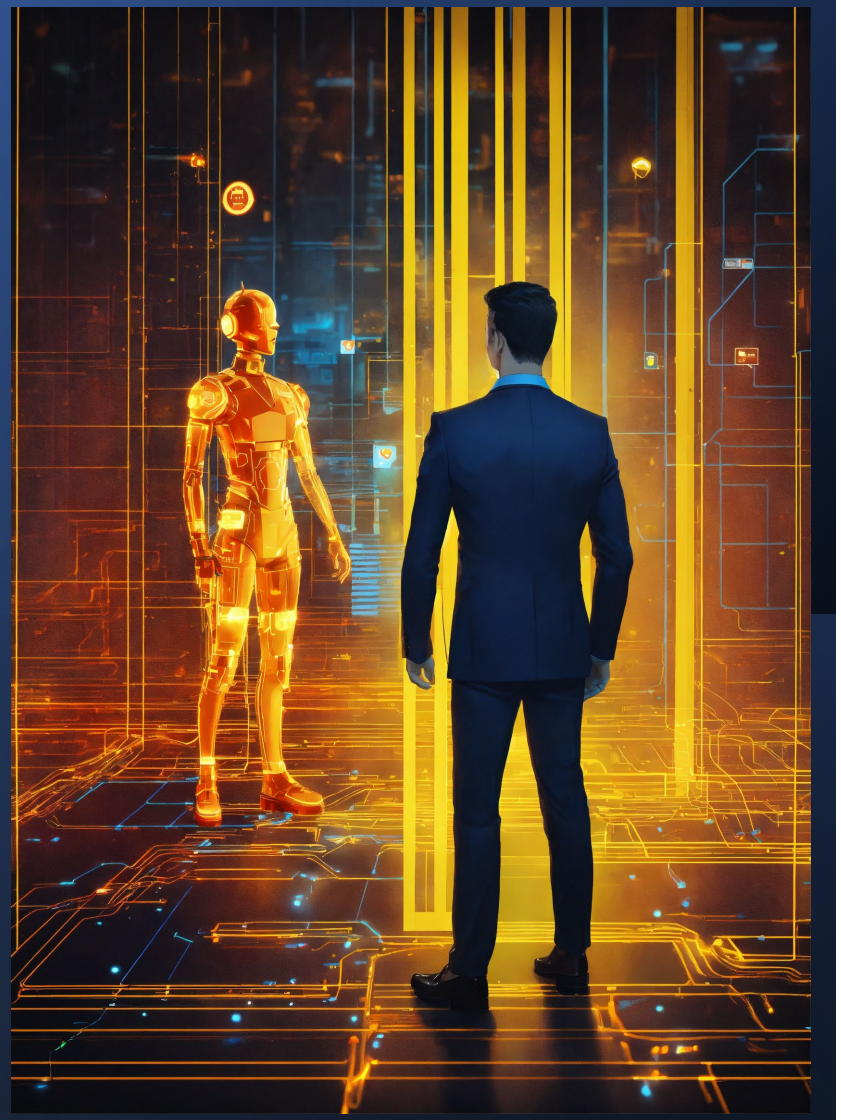
AI and Jobs



AI is expected to impact various jobs in the next five years. According to several sources, the following jobs are likely to be affected by AI:

- Data Entry Clerk
- Telemarketer
- Factory Worker
- Cashier
- Driver
- Travel Agent
- Bank Teller
- Bookkeeping Clerks
- Compensation and Benefits Managers
- Receptionists
- Couriers
- Tech jobs include software developers, web developers, computer programmers, coders, and data scientists.

While these jobs may be impacted, it's important to note that AI is also expected to create new job opportunities and revolutionize industries. Therefore, individuals in these roles are encouraged to consider upskilling to adapt to an AI-driven future 1 2 3

NEWS

Texas is replacing thousands of human exam graders with AI

https://perplexity.ai/

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AI and Jobs

Skills for success in an AI-dominated workplace:

Soft Skills (things humans can do that AI can't):

- Communication Skills
- Critical Thinking
- Creativity
- Teamwork
- Emotional Intelligence
- Leadership
- Adaptability
- Empathy

Technical Skills:

- Machine Learning Engineering
- Cybersecurity Skills
- Analytical Thinking
- Cloud Computing Skills

1, 2, 3, 4

https://perplexity.ai/

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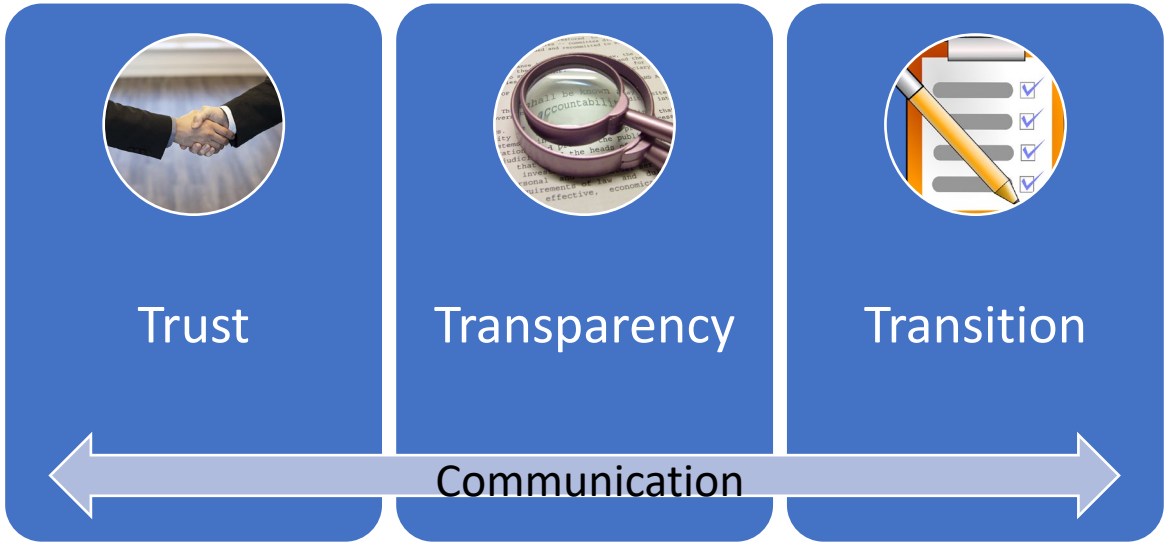
How Companies Should Prepare

Companies should prepare their workforce by:

- **Adding AI to Training Programs**: upskill their workforce and ensure employees are equipped to work alongside AI systems.
- **Cultivating a Growth Mindset**: help them embrace the challenges and changes brought about by AI, fostering a culture of continuous learning and adaptation.
- **Building Trust in AI**: providing them with the right training, education, and mentorship. Constant open and sincere communications.
- **Emphasizing Interpersonal Skills and Domain Expertise**, such as effective communication, teamwork, and deep domain expertise.



Allyn Walker, Dale Carnegie, Perplexity.ai

Questions & final thoughts?

First appearing in the 1968 film 2001: A Space Odyssey, HAL (Heuristically programmed Algorithmic computer) is a *sentient artificial general intelligence* computer that controls the systems of the Discovery One spacecraft .