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What Meta's Cicero and bots that code could mean for highly skilled workers

Article

The data: Automation is in part to blame for worsening wage inequality in the US over the past 40 years, according to **MIT** research.

- US men without high school degrees earned **15% less in 2016 than in 1980**, accounting for inflation, despite the US GDP growing from **$6.82 trillion in 1980 to $18.7 trillion in 2016**, per New Atlas.
- Rapid automation of routine tasks in industries is responsible for **50% to 70% of the increase in US wage disparities** over the last four decades, the MIT economists concluded.

What it means for the elite workforce: Using AI, Big Data, robotics, cloud computing, and rising compute power to fulfill more workplace roles **could chip away at tasks done by the most educated, highly skilled workers**.

Three recent examples illustrate the threat:

Meta AI's Cicero program achieved more than double the average score of human opponents in the strategic board game **Diplomacy** using skills like natural language, negotiation, persuasion, and functional "empathy." **AI's ability to outwit humans in a game of social strategizing, coupled with data analytics, could enable it to perform tasks currently fulfilled by business executives and government officials**.

- **Google** has demonstrated that it can use large language models (LLMs) to teach robots how to write their own code as part of its **PaLM-SayCan** research, which could endow them with complex reasoning, technical, and physical skills useful in a variety of industries.
- And MIT researchers building self-assembling robots—alongside advances in end-of-arm tooling, sensors, and computer vision—could soon eliminate the need for human dexterity in advanced manufacturing.

Automation management is the future of work: The tight labor market is fueling the push for automation as corporations struggle to meet profit margin expectations amid growth headwinds.

- The increasing prowess of AI and robotics makes the future of work a focal point.
- This year's debut of generative AI that can create art, music, write, code, and more has debunked robotics industry leaders' refrain that automation will free humans to pursue creative work.
- But a myriad of AI programs—like Meta's **Galactica AI**—that presented false and biased information as scientific fact gives a glimpse of people's role in the fourth industrial revolution.

- Lacking human values, **advanced AI-powered programs and machines will require human management and surveillance, much of which will likely take place in the cloud and could result in an influx of new jobs**.
- This oversight role may be challenged by AIs learning to cheat, as **Oxford University** and **Australian National University** researchers have warned. Meta's Cicero gives credence to the possibility.

Processes That Feature AI in Day-to-Day Use at Their Company According to Tech/Media/Telecom Executives Worldwide, May 2022

% of respondents

Operations and finance	
Cloud pricing optimization	48%
Backend and production operations automation	43%
Research and development	43%
Experimentation and testing	42%
IT operations management	42%
Predictive maintenance	42%
Digital assets/twins	41%
Uptime/reliability optimization	41%
Data privacy and governance	40%
Customer experience and marketing	
Customer feedback analysis	45%
Customer service operations	44%
Voice assistants, chatbots, and conversational AI	44%
Personalization	42%
Contact center optimization	41%
Workforce and HR	
Workforce scheduling optimization	41%

Note: n=645
Source: Deloitte, "State of AI in the Enterprise, 5th Edition," Oct 18, 2022

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