Workforce Exposure to AI Automation

A Breakdown Using Real-World AI Usage Sources

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Motivation

Artificial Intelligence (AI) has been predicted by some to automate large portions of work, bring significant GDP gains, or fundamentally restructure how value is created in the economy. It has also been predicted to be not much more than another technological advancement as happened with the printing press, the internet, or the personal computer. Having accurate measures of how AI is affecting the workforce is vital for policymakers designing intervention, educators redesigning curriculum, and businesses deciding how to adapt.

The Gap

Most methods used to measure AI workforce exposure have been done using theoretical measures [1, 2, 3]. We propose a way of measuring exposure by utilizing two real world AI usage sources. This allows for incorporating real world context and human judgement into the use of AI for economic work which theoretical measures largely miss. This also allows for proxies for not just AI capability, which theoretical measures capture, but also AI adoption, which is just as important to AI workforce impact independent of capability.

Methods

We take data from Anthropic and Microsoft where they classify what economic tasks people used their AI chatbots (Claude and Copilot respectively) for [4, 5]. We use this task set data to estimate the degree to which each task can be automated versus augmented and map this onto various measures of workforce exposure using data from the Occupation Information Network (O*NET) and Bureau of Labor Statistics (BLS), covering sector and occupation exposure, workers and wages, skills/knowledge/abilities, work activities, preparation level, physicality, agentic tooling reach, state groupings, and temporal trends.

Key Findings

Across the economy, 29.3% of tasks are exposed, corresponding to 58 million workers (37.5% of the workforce) and $4.1 trillion in wages (41.5% of the economy). Exposure converges on Computer and Mathematical, Sales, Business and Financial Operations, Office and Administrative Support, Education, and Arts Design and Entertainment. The most AI-exposed skills are speaking, reading comprehension, and instructing; the most exposed work activities are working with computers, updating and using relevant knowledge, and interpreting information for others. Less physical occupations are more exposed (physical task share correlates with exposure at $\rho = -0.78$) and among non-physical work, exposure clusters in a similar range regardless of preparation level. Exposure is trending upward across data snapshots.

Implication

Our findings suggest where we will see the most transformation to what work looks like going forward, which makes proactive integration of AI into these areas and evolution of the tasks within them a pressing need. These findings provide a detailed signal on workforce exposure from AI that can direct policy, education, and workforce adaptation efforts toward the areas of greatest transformation.

References

[1] Eloundou et al. (2024). GPTs are GPTs. Science.

[2] Felten et al. (2021). Occupational exposure to AI. SMJ.

[3] Schaal (2025). Theory-based AI exposure index. WP.

[4] Handa et al. (2025). Anthropic Economic Index.

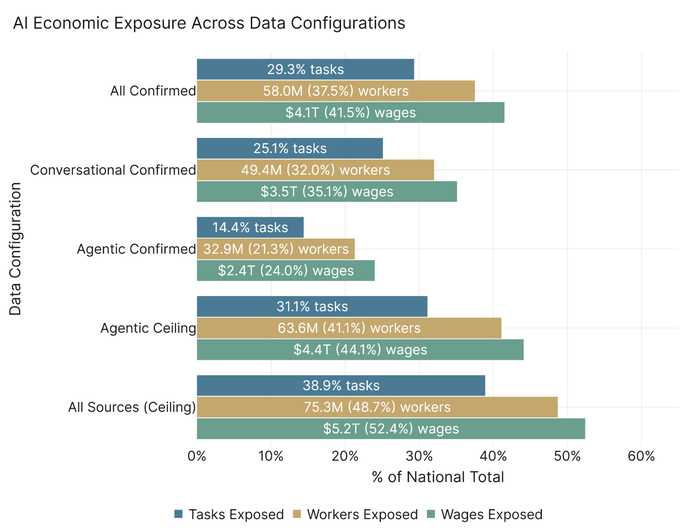
[5] Tomlinson et al. (2025). Working with AI. Microsoft.

29% of tasks across the U.S. economy are exposed to AI, concentrated in **tech, sales, business, office, and education work.**

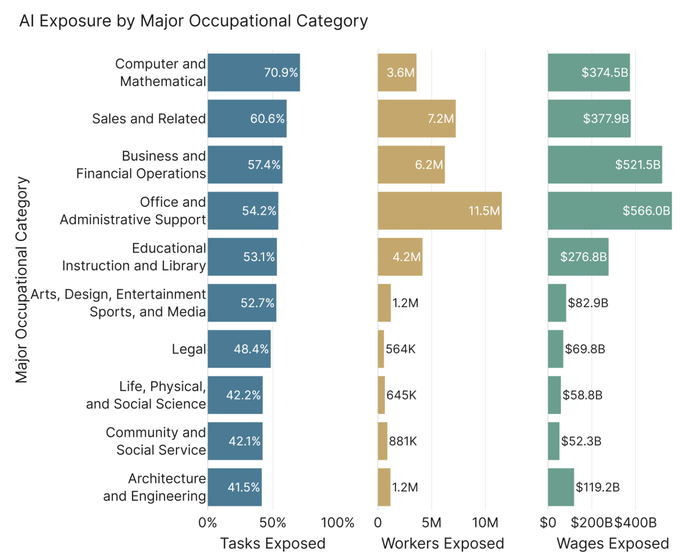
This reaches **58 million workers** (37.5% of the workforce) and **$4.1 trillion in wages** (41.5% of the economy)

Scan for full paper, data, and code

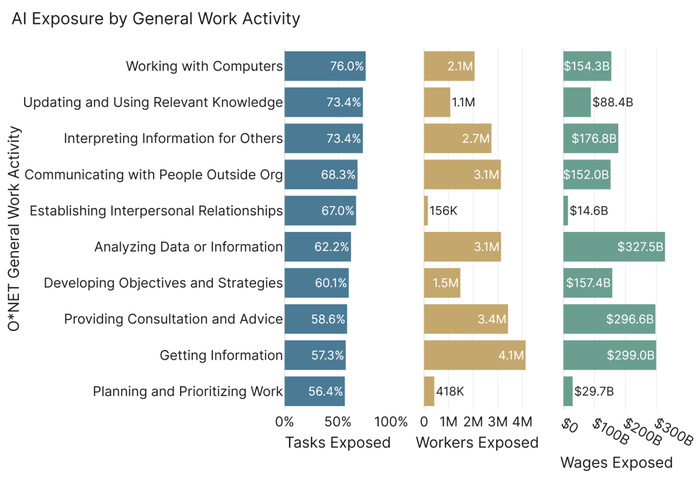
Economy-Wide Exposure Across Configurations



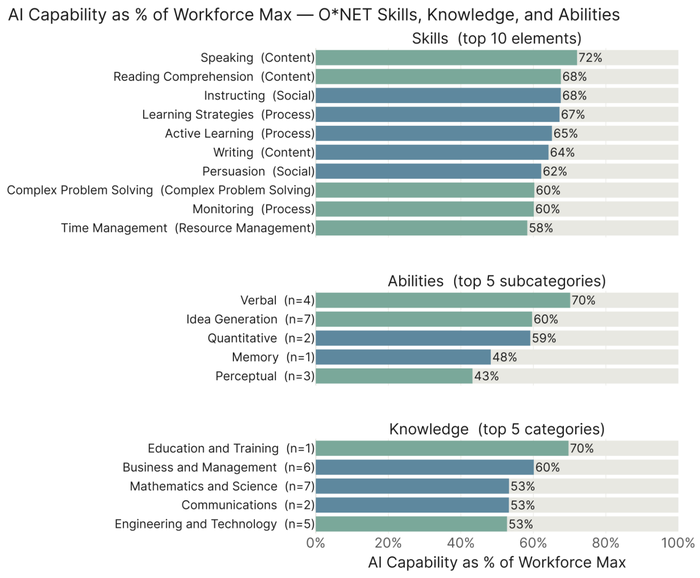
Top AI Exposed Sectors



Top AI Exposed Work Activities



Top AI Exposed Skills, Knowledge, and Abilities



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