How is AI affecting freelance jobs?

Written by

Xinrong Zhu

Published

5 February 2024

Category

Technology

Key topics

Artificial Intelligence, Digital Transformation, Innovation, Jobs and Labour, Technology

Which industries is generative AI reshaping? Who are the winners and losers of the automation of expertise? What impact will this have on livelihoods and economies?

Early in 2023, we learned that freelance writers in Kenya were struggling to make a living in a once thriving market. For years, remote ghostwriters have supported themselves and their families by writing essays and other tasks for US-based students.

But within a few months of the launch of ChatGPT, these freelance workers have seen demand for their skills plummet, along with their pay, as students turned instead to AI to do the job they'd once contracted to humans.

Since ChatGPT launched in November 2022, its use has soared. We wanted to know who else was feeling the brunt of automation beyond freelance writers.

Our initial investigations reveal that **the rise of new generative AI tools has been swiftly followed by a substantial fall in demand for freelancers**. Seven months after ChatGPT's release, online freelancers in professions that are more vulnerable to automation saw an overall 21 per cent fall in weekly demand for their skills compared to those whose jobs involve more manual tasks. Results are clear: generative AI is reshaping job markets.

How did we discover which jobs are being affected by generative AI?

A vast international freelancing platform tells the story through the job posts of the employers who use it. Thousands of new jobs are advertised on this site daily – it's a reflection of the fast-changing worldwide market for short term, task-based remote work.

With access to two years' worth of data from July 2021 to July 2023, we analysed nearly two million (1,725,587) unique job posts from all over the world. We were able to examine in depth how the volume and type of work in demand changed after the introduction of ChatGPT and other AI tools.

Previously, when researchers have assessed the impact of AI on jobs, they've concentrated on writing. But we've broadened this investigation to include a range of exposed professions, including work that involves coding and automation, such as engineering, software, and app and web development. These are the types of expertise that new generative AI is becoming increasingly adept at replacing.

Online jobs less affected by ChatGPT include more manual work such as data entry, video and audio editing, and social media post production. But visual creative professions aren't immune to automation, our analysis found: the advent of text-to-image generation through AI has seen work in graphic design and rendering of 3D images experience a 13 per cent fall in demand.

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The 21 per cent difference between jobs more and less prone to automation is an accurate reflection of the demand from employers on the freelance platform. Previous research has focused upon the supply side (the jobs accepted by freelancers) but this statistic might be affected by other factors such as quality and freelancers' skills.

Interestingly, we discovered that, **rather than falling, rates of pay rose very slightly for the jobs prone to automation**. Our hunch is that it's the simpler, shorter-term jobs that are being replaced by AI, whereas employers still require human expertise for the more complex tasks – which are more valued by employers and where freelancers can demand higher rates. While there's no direct means to measure job complexity, we were able to estimate this from the job descriptions themselves.

We backed up these findings with a couple of separate investigations. Patterns from Google searches confirmed that job categories linked to higher awareness of generative AI also exhibit a more significant decline in demand from employers. In addition, a metric which measures the exposure of certain types of work to artificial intelligence also confirmed our findings.

What will the future impact of generative AI be?

Our work raises questions for future research. Is the impact of generative AI more pronounced in freelance markets than in traditional corporate environments? Online work is typically short-term, tightly defined and transactional; it's a flexible market where suppliers (the freelancers) are less likely to have a relationship with employers and may live in a different country.

By contrast, traditional work environments might be more regulated and unionised, less flexible and more stable. Yet online freelance platforms play a significant role in economies: latest figures show they provided work for some 8.5 million freelancers worldwide, while some 2.3 million work full time across the range of platforms.

We've shown the difference between jobs more and less at risk of automation – but are the numbers of job postings falling overall? And among the professions more prone to automation, such as writing and coding, are some more vulnerable than others? Writing jobs, we found, fell by 30 per cent, whereas coding fell by 20 per cent.

While our findings may paint a gloomy picture for online freelancers, as ever there will be winners as well as losers in this era of change. Whenever technology sweeps professions aside, new jobs emerge. New paradigms bring new opportunities and propel industries into unknown futures. Today, tasks that require greater degrees of creativity, intricate problem-solving and nuanced understanding remain the preserve of humans. The future will require different skills – and the human intelligence to provide them.

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About Xinrong Zhu

Assistant Professor in Marketing
Xinrong Zhu is Assistant Professor in Marketing at Imperial College London Business School. Her research interests include quantitative marketing, empirical industrial organisation and retail analytics.

Read Xinrong's Imperial Profile for more information and publications.

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