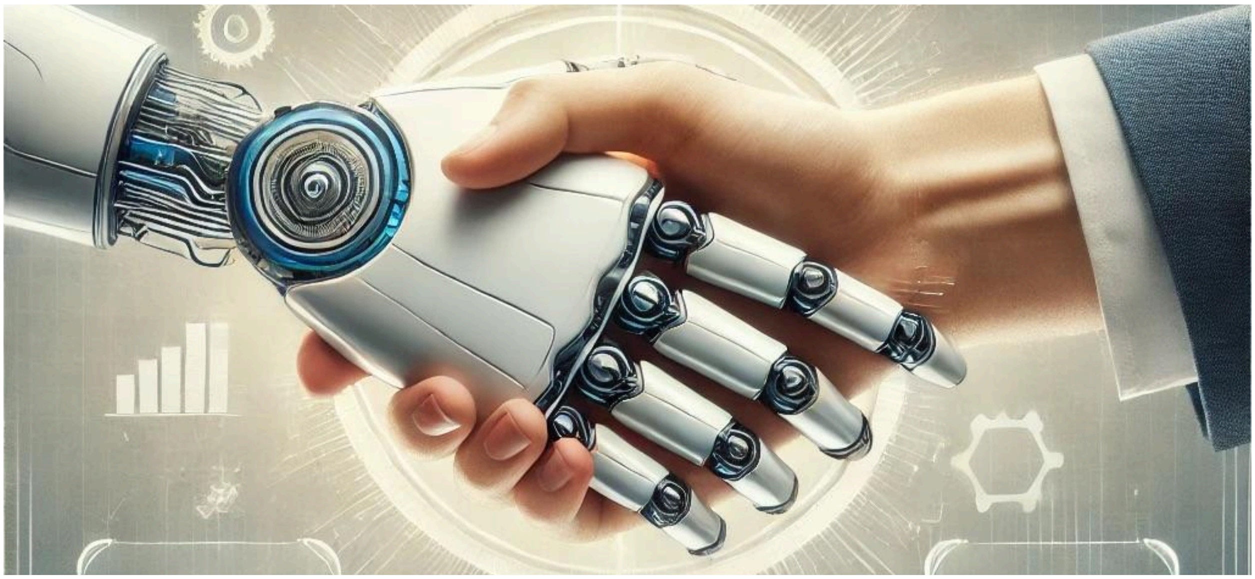
MACRO

Generative AI is Here to Stay: What About the Jobs?

Exploring the impact of generative AI on the US job market and the future of work.

Giorgi Kukishvili Sep. 13th, 2024

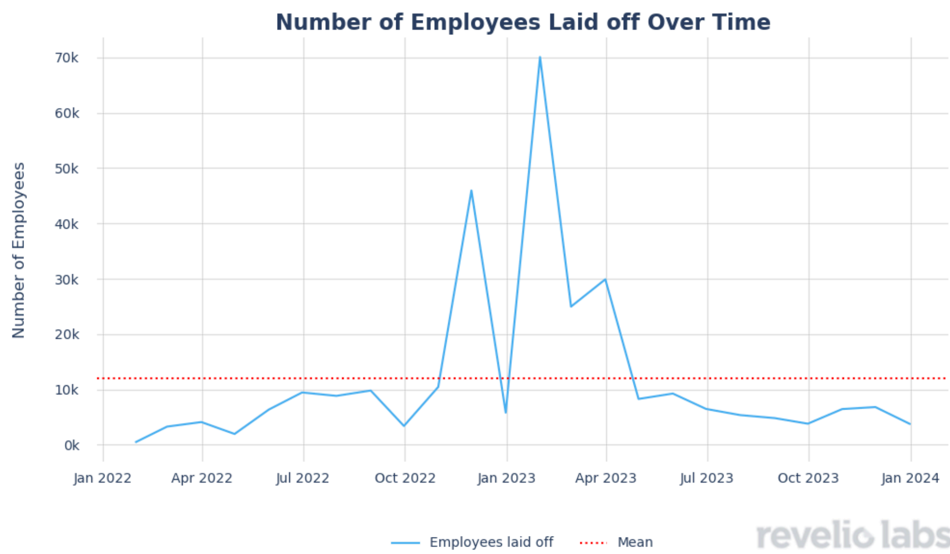


- While it has shaken the job market in certain sectors, generative AI is also creating new opportunities, especially in engineering and technology roles related to AI development and maintenance.
- Layoff and job posting data reveal that while layoffs surged in late 2022 and early 2023, demand for tech roles has since stabilized and when it comes to AI-related fields it has increased.
- Inflation, COVID-19 recovery, and seasonal hiring patterns have significantly influenced job market fluctuations, highlighting the complex relationship between economic forces and technological advancement.

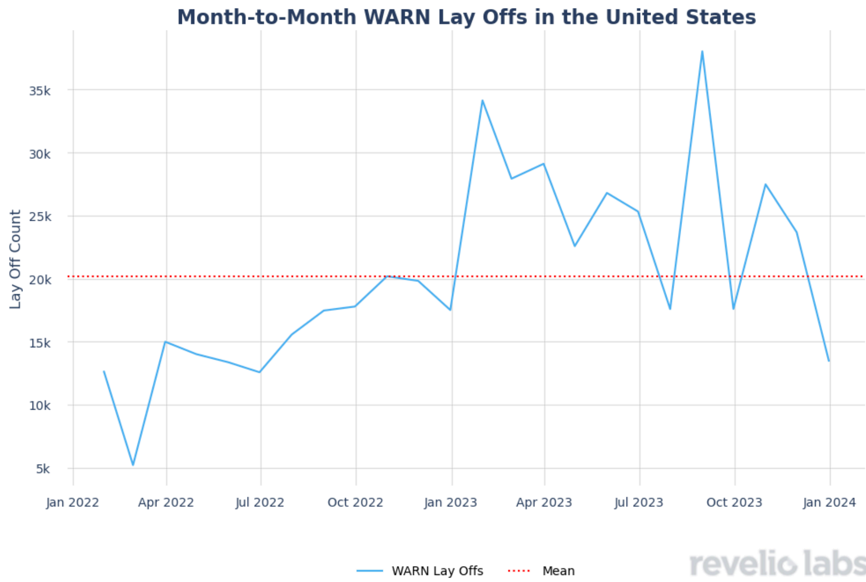
Like a coin, every revolutionary event has two sides where analysis of one side reflects the positive outcomes, while the other shows the negative. Yet, the reality often lies somewhere in the middle.

During the Industrial Revolution, many lost jobs due to the decline of hand-spinning, an early example of technological unemployment. At the same time, the steam engine spurred the creation of new job opportunities. Similarly, the automation revolution and the rise of the internet reshaped the labor market, replacing some middle-class jobs while creating entirely new ones. Now, with the emergence of generative AI and the race toward AGI, it has become important to examine how this technology is linked to the job market and what we can expect in the future.

In a previous newsletter, we used the WARN Act and Layoffs.fyi data to forecast upcoming layoffs. We will revisit these datasets to analyze what has changed since in the labor market.

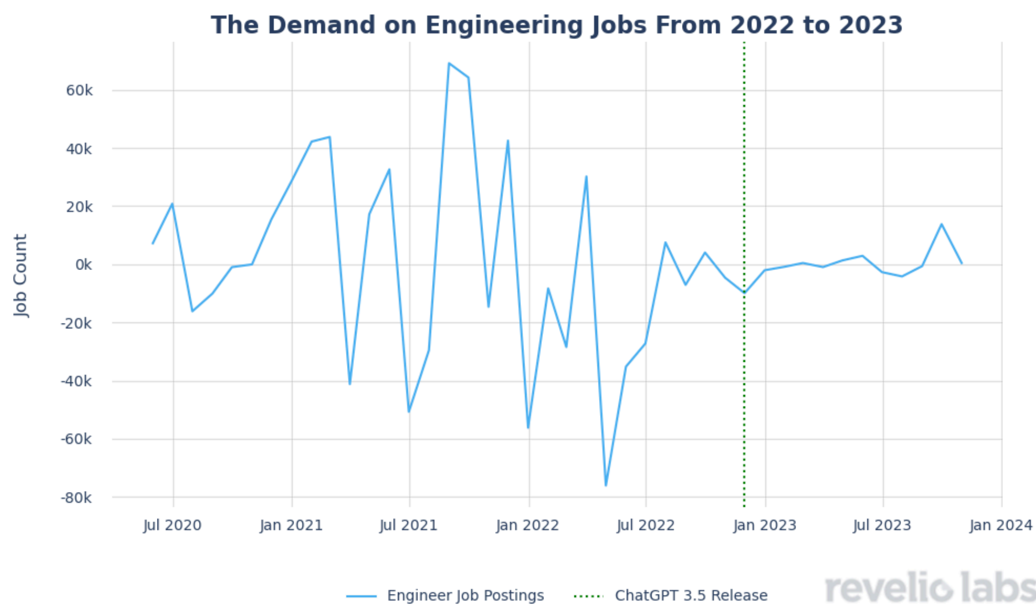


Data from Layoffs.fyi shows a spike in layoffs in late 2022 and early 2023, followed by a significant decrease in subsequent quarters. This trend may reflect corrections in the labor market.



The WARN Act data follows a similar pattern, with layoffs increasing through 2022, peaking in mid-2023, and then declining. But are these layoffs driven by AI, or are other factors at play?

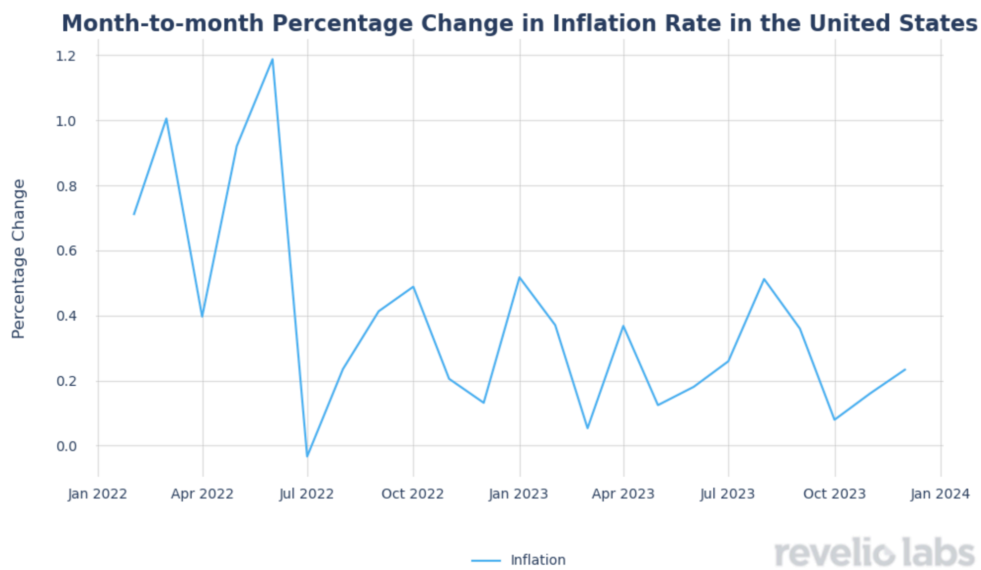
To explore this, we analyzed the job posting data compiled by Revelio Labs, specifically engineering roles, from late 2020 through 2023. The job posting dataset contains aggregated job posting statistics reflecting the underlying job dynamics over the fiscal year. To estimate demand we compare job postings with job removals.



In late 2020, there was a sharp rise in engineering job openings, with fluctuations through 2021 and 2022. By the end of 2022, the demand for labor stabilized. However, after the launch of

ChatGPT 3.5 in November 2022, engineering job postings increased, likely driven by the need to develop and maintain generative AI models.

Labor market outcomes are influenced by more than AI alone. Factors like seasonal hiring in tech, inflation, and the lingering economic impact of COVID-19 play significant roles. Early in the pandemic, mass layoffs occurred linked with the risks of a looming recession, but fiscal stimulus, remote work, and increased money supply fueled post-peak COVID-19 company growth, boosting labor demand. However, by mid-2022, rising inflation led to decreased demand and revenue, forcing companies to reduce their workforce.



Looking at the CPI data we can graph the month-to-month percentage change in inflation rate in the US. We can observe that towards the second quarter of 2022, among other things, the aggressive expansionary fiscal policy was linked to rapidly rising inflation rates which were associated with decreasing demand due to rising prices, and since companies could not bring in as much revenue as before they had to cut costs and make adjustments in their workforce. Thus, the tightening labor market we see today is the likely consequence of macroeconomic circumstances, and generative AI, similar to the Industrial Revolution, could create more jobs than it will take away.

In conclusion, the current tightening labor market is a result of these broader macroeconomic factors, and much like the Industrial Revolution, generative AI could ultimately create more jobs than it eliminates. As an outlook, we expect the labor market to remain tight for a little while longer until the demand for goods stabilizes, after which the labor market will gradually loosen.

683 Words.