

The Effects of AI on the Job Market- Looking to the future

Risheel Vakkalagadda

Working Draft

Word count: 1298

Bentonville High School

Introduction

Mark Rayer (2023), the Lead Data Analyst at the *World Economics Forum*, predicted that “4 of the 27 main industries will show job loss[due to AI].” Statistics like this lead people to assume that AI may take jobs. Artificial intelligence(AI) is a programmed language model that can think and learn *like a human*, so people may think it can replace their job too. AI is a relatively new concept, making it hard to tell what will happen in the future, but predicting the next decade may be possible. Yossi Sheffi (2023), an MIT professor, warns unions that “Now is the time for labor unions to use their leverage... to ensure the future of their members,” telling them to make sure their jobs are protected against the AI takeover. Conversely, a chart Stanislava Ilic (2021), a government reporter for the *Bureau of Labor Statistics*, posted projects an extra 3.7% average increase in all fields along with a 13.6% increase in the security field. Since people may not know what AI is capable of, its use is crucial in predicting the future of the workplace. Therefore, it would be wise for employers, employees, and future workers to predict how AI could affect jobs and the job market over the next decade.

Main Jobs AI May Take

AI may still cause unemployment in some fields of work. In the beginning, it was stated that 4 of the main industries may experience job loss. That is almost 15% of all industries that may experience unemployment. An article by the *International Labor Organization* (2023) says that “5.5 per cent[percent] of total employment in high-income countries is potentially exposed to the automating effects of the technology.” While 5.5% may seem like a small number, that is 7.08

million jobs just in the United States. Chris Vallance (2023), a *BBC* Technology Reporter, predicts that “46% of tasks in administrative and 44% in legal professions could be automated.” As of now, AIs like ChatGPT can generate text to answer questions. With more time, it could be able to create news articles, legal documents, and maybe even hold customer service conversations. Aaron Mok and Jacob Zinkula (2023), Business Insider writers, state that “Google found that, in theory, the search engine would hire the bot as an entry-level coder,” showing AI can be just as efficient as humans in some jobs, like coding. This further emphasizes that AI can already be on the level of some human workers and along with all the jobs taken, AI has caused significant fears for job security.

Main Jobs AI Could Create

Even though AI may take some jobs, research also shows it could create jobs. As mentioned earlier, 4 of the 27 industries may experience job loss. One of these industries includes oil, specifically jobs on oil rigs. Angus Chen (2016), a freelance reporter with a Ph.D. in Biochemistry, writes on the health concerns of oil rig workers, stating that “They worked under any conditions... it wasn’t unusual to see someone die on an oil rig,” showing the dangers of working on an oil rig, meaning that automating this would lead to lower mortality rates. Some people may think that AI is only a language model and can not do physical work, but during the NWA Tech Summit in Rogers Arkansas (Oct 30th -Nov 1st, 2023) *Tyson Foods* showed a robotics arm, when given digital input, produced physical output. It is in the fundamental stages right now, but, with time, this technology could be on oil rigs on a large scale. Kate Whiting, a senior writer for *The World Economics Forum*, predicts “a 40% jump in the number of AI and machine learning specialists.” Since AI specialists are required to make it, we may see an influx

in those jobs. She also predicts “a 30-35% rise in demand for roles such as data analysts and scientists or big data specialists, and a 31% increase in demand for information security analysts.” These statistics and the presented evidence show that AI has many positive effects on the jobs market.

How AI May Be Added Into the Workplace

How AI affects the job market is decided by how companies want to use it. BBC posted an article by Josie Cox (2023), a reporter with an MBA from Columbia Business School, stating that “Technology advancements have shown us that, yes, technology has the potential to automate or streamline work processes.” The technology she is referring to is AI, showing us that it can take work from employees, effectively cutting down the amount of required workers. During personal interviews conducted with AI professionals during the Tech Summit, there were mixed responses on whether AI may take or create jobs, but it seems like it all comes down to how companies want to use AI. Josh Dunc (2023), the Chief Client Officer for Metova, a mobile software company, was asked about the long-term effects of the number of jobs available due to AI, he said, “It will take jobs away more than it produces.” When asked why he thinks that he said, “In the beginning stages, it’ll be a tool that people use, ultimately the technology will get so good it’ll start to replace people.” What this shows is that the rapid growth of AI will eventually lead to it replacing people because it will have the ability to. An opposing view from Amit Ben (2023), founder and CEO of One AI and Forbes Council Member, states that “AI has allowed for the automation of tasks that are repetitive or time-consuming or that require specialized knowledge or skills, freeing up human workers to focus on tasks that require

creativity, problem-solving or emotional intelligence.” This emphasizes that AI can help employees finish busy work and leave more time for work that requires their skill set, which would spark innovation. In another interview featuring a Specialist from Juniper Networks, who focuses on MIST, which is Juniper Network’s new product line that’s AI-driven, Greg Tillett (2023) states “It’s[AI] gonna displace some[jobs], but there’s always going to be a need for skilled workers, so there’s just going to be shifting in jobs.” He is saying that AI will not remove jobs, but rather move people to different ones. Scott Farris (2023) of Walmart Global Tech, who manages the XR Program, which is a project that works on integrating AI into virtual reality, mentions that “if we have higher efficiency goals, obviously jobs won’t be eliminated, we’ll just do more... if our main thought process is how can we cut costs, AI’s going to be the weapon used against employees.” This speaks to the point that if we want AI to help cut costs, then it may take jobs, but if we want to use it as a tool, it could help us with work rather than taking it.

Takeaways

During the Industrial Revolution, factory jobs were being taken left and right by machines, probably leading people to assume their jobs were gone. Valance also states that “60% of workers are in occupations that did not exist in 1940.” Similar to what happened during the Industrial Revolution, this could be an AI Revolution. Based on these findings, it is safe to conclude that how we use AI could be the deciding factor on whether AI could take or create jobs. If we want to use it to help with our work, it could create more jobs, but if we use it to cut the bottom line of workers, it could lead to unemployment. AI is relatively new, and because of its rapid growth, it is hard to tell what could happen in the future. We can use our experiences with AI to lead our thinking, but we have only seen a fraction of AI’s capabilities.

Ben, A. (2023, October 5). Council post: How ai is integrating into the workforce. Forbes.

<https://www.forbes.com/sites/forbestechcouncil/2023/03/28/how-ai-is-integrating-into-the-workforce/?sh=478e21e74da9>

Chen, A. (2016, June 17). *Invisibilia: How learning to be vulnerable can make life safer*. NPR.

<https://www.npr.org/sections/health-shots/2016/06/17/482203447/invisibilia-how-learning-to-be-vulnerable-can-make-life-safer>

Cox, J. (2023, July 13). Ai anxiety: The workers who fear losing their jobs to Artificial Intelligence. BBC Worklife.

<https://www.bbc.com/worklife/article/20230418-ai-anxiety-artificial-intelligence-replace-jobs>

Dunce, J. personal communication, October 30, 2023

Francis, F. personal communication, October 30, 2023

Ilic, S. (2021, March). *Faster Employment Growth projected*. U.S. Bureau of Labor

Statistics. <https://www.bls.gov/opub/btn/volume-10/investigation-and-security-services.htm>

International Labour Organization. (2023, August 21). *Generative AI likely to augment rather than destroy jobs*. Artificial intelligence: Generative AI likely to augment rather than destroy jobs.

https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_890740/lang--en/index.htm

Mok, A., & Zinkula, J. (2023, September 4). Chatgpt may be coming for our jobs. here are the 10 roles that AI is most likely to replace. Business Insider.

<https://www.businessinsider.com/chatgpt-jobs-at-risk-replacement-artificial-intelligence-ai-labor-trends-2023-02>

Rayer, M. (2023, August 14). *nearly half (49%) of companies expect adopting AI to create jobs, well ahead of the 23% of respondents who expect it to displace jobs.* World Economic Forum.

<https://www.weforum.org/agenda/2023/08/ai-artificial-intelligence-changing-the-future-of-work-jobs/>

Sheffi, Y. (2023, September 15). *The UAW and other unions must focus more on AI and automation in their negotiations.* Harvard Business Review.

<https://hbr.org/2023/09/the-uaw-and-other-unions-must-focus-more-on-ai-and-automation-in-their-negotiations>

Tillett G. personal communication, October 30th, 2023

Vallance, C. (2023, March 28). *AI could replace equivalent of 300 million jobs - report.*

BBC News. <https://www.bbc.com/news/technology-65102150>

Whiting, K. (2023, May 4). *These are the jobs most likely to be lost – and created – because of AI.* World Economic Forum.

<https://www.weforum.org/agenda/2023/05/jobs-lost-created-ai-gpt/>