Entering the Workforce Alongside Artificial Intelligence

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Introduction

The overall culture of the world as we know it is rapidly changing due to the quickly-evolving artificial intelligence being implemented into all areas of life, and this does not exclude the workplace. The adoption of artificial intelligence can look incredibly different in different spaces, and this is relevant especially within the scope of the workplace. An important consideration that will shape the perspective of this paper is taking into account the impact of AI's incorporation into the workplace on those of us who are also entering the workforce. Our historical understanding and education in preparation for the workforce may no longer cut it, and in order to adapt we must be informed. If we don't adapt with the times, we will be left behind and seeking jobs that will become obsolete. With this all in mind, this paper will encompass all of the general knowledge needed by someone that is soon entering the workforce. First, in order to discuss artificial intelligence one must be somewhat familiar with it, so a comprehensive but simple description will be provided. Next, an overview of AI within the workplace will be discussed to understand the space that is being focused on. Then, an exploration of perceived benefits for us in the workforce alongside AI will be discussed, quickly followed by the consequences and perceived risks. Further, with everything previously said and ethical considerations in mind, the future and recommendations for AI *and* people in the workforce complete this paper. While the future can not be known for sure, it is important to look ahead towards the future and us students' careers with artificial intelligence in mind. Ultimately, this paper will focus on artificial intelligence's capacity to vastly change the workplace in both positive and negative ways and potential future steps best for us entering the workforce.

Understanding AI

Artificial intelligence itself is a broad, all-encompassing entity that can not easily be simplified. Microsoft helps give an understanding of artificial intelligence as "the ability of a computer system to deal with ambiguity, by making predictions using previously gathered data, and learning from errors in those predictions in order to generate newer, more accurate predictions about how to behave in the future" (2023). Whether it be ChatGPT, Dall-E, predictive text, customer service, or anything else, there are a multitude of artificial intelligence tools that have a variety of applications in the real world, but especially in the workplace as discussed later. A massive subset of artificial intelligence is that of large language models, which are "pretrained foundational models that are self-supervised and can be adapted with fine-tuning to a wide range of natural language tasks," (Sejnowski, 2023). LLMs can be seen in action through the current most popular artificial intelligence application, OpenAI's ChatGPT. Artificial intelligence is an overall tool that can produce content and answers from datasets they are given, at a speed that humans can not match. Above all else, artificial intelligence is "a fully realized productivity tool with a mandate to eliminate friction wherever possible," no wonder its implementation in the workplace is a dominant societal focus (Warzel, 2023). Artificial intelligence's wide applications grants an ability to implement it across many areas of life. Areas that can or already have been impacted by artificial intelligence include education, arts, politics/law, public policy, and most important to this, the workplace and the business world. The workplace is taking advantage of artificial intelligence's variety of applications, and it is up to us also entering the workforce to stay informed.

AI in the Workplace- Overview

Artificial intelligence has the potential to perform a multitude of tasks within the workplace, and the biggest question on everyone's mind is whether or not artificial intelligence

will replace workers? Unfortunately, there is not a straightforward answer to this question, however it can be said for certain that artificial intelligence will change the experience of workers. In a survey done by Eloundou et al. in 2023, they found "that around 80% of the U.S. workforce could have at least 10% of their work tasks affected by the introduction of LLMs". With this finding, it becomes clear that artificial intelligence has the versatility and reach to be incorporated into the vast majority of the U.S. workforce. With this finding also comes distinctions of what areas of work are more or less exposed to artificial intelligence. An interesting and key discovery is the potential for artificial intelligence to replace workers/jobs that are traditionally college-educated and well-compensated (HAI, 2023; White House, 2022). Herein lies the important focus of those of us entering the workforce, presumably seeking well-compensating jobs with college degrees. On the other side of this however still depicts lower-skilled jobs being vulnerable to artificial intelligence, such as inspection or quality control (White House, 2022). Taking into consideration the absolute versatility and ability of artificial intelligence, it is only understandable to find many jobs vulnerable to its implementation. While this may be true, there are still areas of work that are believed to be less exposed to artificial intelligence, these of course being humanitarian or interpersonal areas. Some jobs that have been said to be less exposed (as of yet) to artificial intelligence include "childcare workers, hotel clerks, and clergy" (White House, 2022). Whilst there are surely many areas exposed to artificial intelligence, there are still some that thus far remain for humans-only. Another important point to make is that exposure to artificial intelligence is not inherently good or bad- this will be further discussed throughout the paper.

Another key aspect of artificial intelligence in the workplace is the implementation thus far, and what it can look like. As just described, artificial intelligence has the potential to take

over some aspects of a job, and this can often manifest as the 'routine tasks'. Routine tasks as described in the 2022 White House Brief are the tasks that "follows an explicit, fully specified set of rules and procedures," which can typically be easily codified to be done by machines. These tasks we are already seeing being performed by artificial intelligence include chatbots for customer service, image recognition like face identification, and robotics in manufacturing spaces. Implementation of artificial intelligence applications can be seen already in the work areas of finance, national security, health care, criminal justice, transportation, smart cities (West & Allen, 2018). Artificial intelligence has been part of the workplace already, however with the most recent developments and quick evolution of LLMs it is predicted that artificial intelligence will soon be increasingly implemented. Even prior to the current influx of artificial intelligence in the workplace, the "proportion of companies adopting AI in 2022 has more than doubled since 2017" (HAI, 2023). Overall, implementation of artificial intelligence in the workplace is on the rise, and it is necessary for those also entering the workforce to ruminate over the already-changing workplace environments.

Benefits

Amidst the influx and unstoppable implementation of artificial intelligence, it is essential for those of us also being implemented into the workforce understand the various benefits a workplace with artificial intelligence can have. Unsurprisingly, artificial intelligence provides a new level of efficiency and productivity to the workplace. One of the most obvious advantages of artificial intelligence is the speed at which it can complete tasks. At its core, artificial intelligence is consuming and processing large amounts of data at a speed that humans can not (HAI, 2023; Lowery, 2023; West & Allen, 2018). With these faster models comes the ability to create more content, creating an efficiency that is not possible by people. Productivity growth

could be found in many different workspaces including warehousing, manufacturing, digital content, finance, customer service, and more (HAI, 2023; Lowery, 2023; West & Allen, 2018).

Another aspect of artificial intelligence's benefits that is intertwined with productivity is that it could assist the work of people and/or create potential new jobs. In taking care of the 'routine tasks,' or other responsibilities, human workers may receive more time to do the preferred or different parts of their jobs. In the example of artificial intelligence within healthcare, it has been seen already that the ability to collect and consume data on patients' health histories offers healthcare professionals more time to work with their patients rather than on paperwork and basic procedures (HAI 2023). Further, in the space of criminal justice, it is believed artificial intelligence could potentially increase the efficiency of trials, therefore granting judges and people of importance the ability to handle matters in more appropriate timelines (HAI, 2023). Job shifts could also come to fruition through the creation of new artificial intelligence- focused positions. Already there is an increased demand for artificial intelligence-based skills in almost every industrial sector (HAI, 2023). Despite the potential for some jobs to become obsolete due to artificial intelligence, there is still room for job growth with artificial intelligence as a focus.

Whilst many workers are anxious of artificial intelligence taking jobs, it has been found that many in the workforce have found success working alongside it. In a survey on the use of Copilot- a text-to-code system that "88% of surveyed respondents feel more productive when using the system, 74% feel they are able to focus on more satisfying work, and 88% feel they are able to complete tasks more quickly (HAI, 2023). Artificial intelligence's ability to *assist* rather than *replace* is often overlooked, yet its' assistance has resulted in advantages to workers.

Consequences/Risks

The conversation of artificial intelligence in the workplace is incomplete without asserting the potential risks and consequences that come with its implementation. There has been much hysteria over the idea of artificial intelligence in the workplace in relation to people losing jobs or negatively changing them, and potentially having irrelevant educational backgrounds to the jobs necessary and available.

First, when looking at job loss, it is easy to deduce that with artificial intelligence's increased ability and speed at which it can perform work tasks, it has the potential to displace workers. One study reports that "in the next five years, it is likely that AI will begin to reduce employment for college-educated workers" (Lowery, 2023). Another significant number predicted by economists at Goldman-Sachs in 2023 claim that "In the coming decade, the technology will wipe out 300 million jobs," which is "one in every 11 jobs on the planet". Such expectations are concerning for those of us hoping to enter the workforce, but we must be aware of the potential future we will experience. Artificial intelligence has the capacity for mass job obsolescence, likely leading to "mass unemployment and wage stagnation…with inequality yawning to previously unseen levels" (Lowery, 2023). Whilst job loss is an extreme and sensitive example of the potential consequences of artificial intelligence in the workplace, it is still a worthy concern.

The fear of outright job loss is less backed up by educated analyses of artificial intelligence trends, however it is no question that artificial intelligence will *change* jobs. The crucial consideration lies in the idea that the specializations and concentrations many of us entering the workforce are studying and pursuing could be completely destabilized. In 2023, Autor claims the greatest risk to workers by artificial intelligence is "that AI technologies cause too sudden a change in what kind of labor employers want," and "Certain specializations might

get wiped out," leaving workers scrambling. It is a worrisome thought, however very likely due to the pre-existing trends of artificial intelligence's impact on the workplace already. Even the White House has recognized this concern, stating that artificial intelligence's impact on jobs "may lead to difficult adjustments for workers as jobs are redesigned or required skills change" (2022). To those of us about to enter the workforce, it is essential to be aware of the potential environment we may be entering, and thus plan accordingly as discussed in the next section.

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Future/Recommendation

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Through all this, it is apparent that future predictions can not be certain and can be vastly different, however across the board is the emphasis that we as a society (and as a workforce) must begin preparing for the future now. As discussed previously, there are many varying outlooks on what effects artificial intelligence will have on the workplace, however much of these predictions can be covered in the recommended actions of government investment, policy/regulation, and workforce development.

First, a clear recommendation for artificial intelligence's development in the workplace is investing in such development. Across the board of artificial intelligence perspectives stands a call to action for increased government investment (Lowery, 2023; West & Allen, 2018; White House, 2022). Clearly, there is no worthy recommendation in trying to stop artificial intelligence from being part of the workplace, as it is already actively incorporated. With that in mind, it is only best for us as a society and as a workforce to put our best resources into the continued development of artificial intelligence, which includes further government investment. Another important aspect brought up in regards to government investment is that of transparency in development. Government investment will certainly aid in the development of artificial intelligence, however it is also important that those of us in the workforce being directly

impacted by these developments should be aware of what is in development. With this in mind, there are calls for more government investment in *unclassified* research (West & Allen, 2018). Transparency of development is an incredibly important aspect of future development, thus it is essential our transparency needs are met.

Next, one pretty all-encompassing recommendation for artificial intelligence development is of course policy and regulation. In a rapidly shifting workplace environment, it is essential that policies and regulations are in place to protect workers. Many have suggested the implementation of a federal artificial intelligence advisory committee to handle these matters (West & Allen, 2018; White House, 2022). While it appears that the U.S. government has created the National AI Advisory Committee, it is still essential to further develop the program and actually enact policy. West & Allen suggested such a committee should address topics including "competitiveness, workforce impact, education, ethics training, data sharing, international cooperation, accountability, machine learning bias, rural impact, government efficiency, investment climate, job impact, bias, and consumer impact" (2018). While all of these topics are essential in the future of artificial intelligence, when looking from the perspective of those of us entering the workforce, we must push for policy and regulation addressing specifically workforce impact, education, and job impact.

Finally, an incredibly vital aspect to the influx of artificial intelligence for those of us entering the workforce is that of workforce development for *people* alongside the technology. As discussed, there will be shifts in employment whether that be job loss or shifting of responsibilities, thus it is essential we prepare for these effects. Such preparation can come to fruition through "investing in training and job transition services so that those employees most disrupted by AI can transition effectively to new positions where their skills and experience are

most applicable" (HAI, 2023). As we develop artificial intelligence we must simultaneously develop the human workforce in order to develop a best-functioning workplace. It is no question that as the workplace and world dramatically shift, "it is vital that we reimagine our educational institutions for a world where AI will be ubiquitous and students need a different kind of training than they currently receive" (West & Allen, 2018). At the core of it all, humans must adapt in order to remain in the workforce alongside the adoption of artificial intelligence. With this, we must push for thorough workforce development and educational shifts in order to best prepare individuals entering the shifting workplace.

Another interesting recommendation worth mentioning is from Lowery, who believes that adapting a 500 year old approach to our economy and general society would best suit a future with artificial intelligence (2023). This recommendation comes from a future perspective that artificial intelligence will shift the workforce so rapidly that we will be left with mass unemployment and wage stagnation. In this case, Lowery recommends the government take on a universal basic income in order to create time and space for people to adapt to the shifting work industry (2023). While this recommendation is the least realistic by a long shot, it is still worth viewing and comparing to the recommendations that will more likely be acted upon. Above all else, as artificial intelligence is further incorporated into the workplace, recommended priorities lie with protecting and assisting workers through investments and transparency, regulation and policy, and finally workforce development for the people.

Conclusion

All in all, there will be a future with artificial intelligence in the workplace, thus it is the duty of those of us entering the workforce to understand and prepare for this shifting environment. First, one must get to know artificial intelligence both generally and in the realm of

the workplace. Then, to explore the potential benefits and consequences of artificial intelligence in the workplace can further prepare one to the potential future of their work. And finally, to be aware of the recommendations for the future that can best assist those of us entering the workforce. While the future is not easily predicted, it is known for a fact that artificial intelligence will shift the workplace, meaning we must shift with it.

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