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Will AI Technology Reduce Job Opportunities In Future?

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Abstract

The main focus of this study is to perceive whether artificial intelligence influences different aged individuals along with their opinion regarding this new technology that helps us to know the percentage of agreement and disagreement and of the fact that " Will AI technology reduce job opportunities in future?". Data were collected through discussions in peer member groups, and the research portion was surveyed through a Google Form questionnaire. 35 people participated in the survey and shared their opinions by answering the following questions.

Keywords:

AI tools, Job opportunities, AI image, Technology, Automation, Cyber crime, Data management, Solution, Productivity, AI algorithm, Plagiarism, Error free task

Introduction

Will AI technology replace people with machines? How will technology affect tasks and jobs? How will automation affect employees? Asking people around you these questions can yield a variety of opinions. Some will say, "AI will make our jobs easier," while others will respond, "AI tools will be the reason for job loss." It's a debatable subject however while artificial intelligence will replace many jobs, it will also create many others some of which will be

performed independently by both robots and humans. (Thomas,2023). AI is not able to do difficult tasks that a human can do so there's a difference between approaches of human and AI performances.(Glassman,2014). There are a lot of things that a machine can't do but humans can like creative thinking, problem solving, innovating and synthesizing type approaches. An app can dial one's number, even chat and can see face and hear virtually but can't connect emotionally with that person. (Rutledge,2014). Again, it is said that robots will displace old categorized work but again will create new categorized work opportunities. Then in the future there may be observed human-robot work collaborations. (Blumenthal,2014). Again, developing technologies will not replace workforce permanently, rather work will be shifted to other sectors and we still need coders to develop our technologies, and need employees for packaging, sales, assembly and outreach. (Webb,2014). Then, it is predicted that,delivering more services in less time by AI tools with equal level of human involvement will be seen in the future. (Clark,2014).



Figure 1: Source:

<https://builtin.com/artificial-intelligence/ai-replacing-jobs-creating-jobs>

Literature review

Artificial Technology or AI is now a frontline topic. Different people express their opinions in different ways. For some it's a blessing that can solve complex tasks reducing time. Again, for some it's going to be a future destruction that will disable people's imaginations, creativity, critical thinking ability and will increase plagiarism rate etc. According to Aghion et.al (2020), AI technology has significant effect in both firm

and industry sectors. But again, Felten et al. (2019) reported based on 'AI occupational Impact', AI has no effect on employment but has a positive impact on earnings. Then, according to Acemogly et al. (2020), they did not find any link between employment and AI technology. Moreover, the influence of automation density on American employment prospects has been discussed through a theoretical framework, which shows that each and every additional robot among a thousand employees is responsible for a 0.2% employment declination and a 0.37% wage declination.

Methodology

In order to know the conception of people about AI technology i.e., whether it will reduce job opportunities or not in future, an online survey has been done among 35 people who belonged to different ages and professions using google form. To conduct the research, qualitative and quantitative data collection methods have been used through observations, perspectives, experiences, numbers and logics. Then, a focus group discussion method has been used based on age group and profession to get an overall idea of the topic. Next, different journals and research papers have been observed to know the depth of the topic. Finally, based on survey results, information analysis has been done using pie charts.

Data Analysis

An online survey has been done among 35 people belonging to different age groups and professions to know their opinion about AI technology. It has been observed that, the highest number of respondent people belonged to the 21-30 years age group (82.9%) and lowest number of respondent people belonged to 31-45 years age group (2.9%). Again, the maximum number of responses came from the student group (94.3%) and the minimum number of responses came from other professional groups (8.6%). Lastly, the questions they answered had different perspectives so the overall ratio is different in each question.

This article examines the impact of the adoption of AI application technology and automation on the future job sectors. Therefore, the results of these studies indicate many possible scenarios for the future workplace and AI- human ratio.

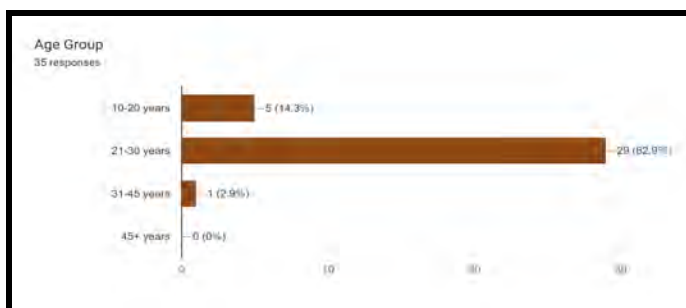


Figure 2- Survey Based on different aged groups.

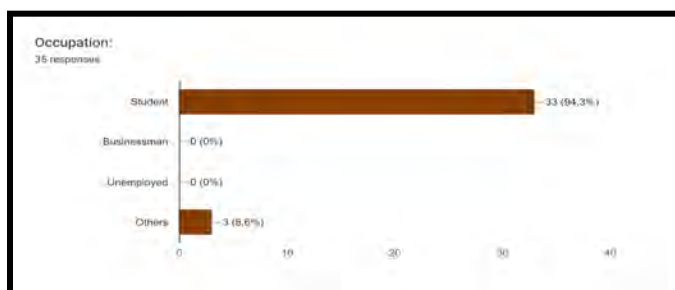


Figure 3- Survey Based on Different types of Professions

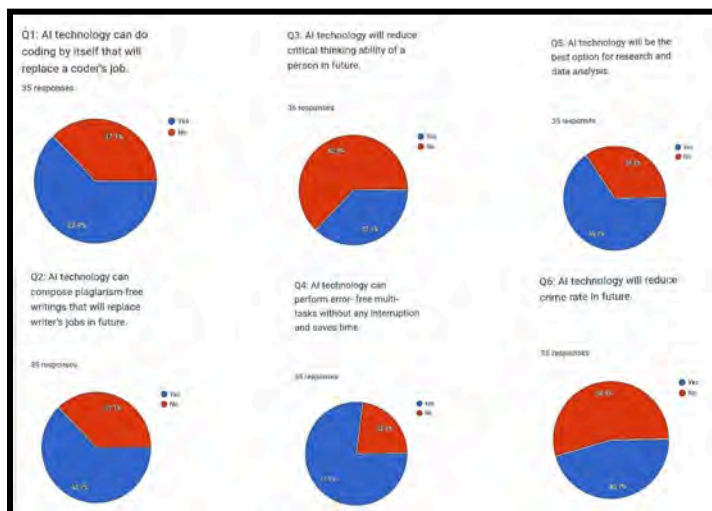


Figure 4- Online survey responses represented by pie charts.

It has been found that, according to pie chart 1, more than 60% of people responded positively and almost 40% of people responded negatively to the fact that AI technology can do coding that will replace a coder's job. Negative response because thinking that maybe AI based tools can only do specific tasks not jobs with no creative analysis and that a human can do. (Cremer and Kasparov, 2021). According to pie chart 2, more than 60% of people agreed and almost 40 percent of people disagreed with the fact that AI technology can compose plagiarism-free writings that will replace writer's jobs in future. Negative response because maybe AI based tools can write plagiarism free writings but can't add emotional appeal to writings to touch the human heart. (Gupta, 2023). Next, according to pie chart 3, almost 40 percent of people agreed and more than 60% of people disagreed with the fact that AI technology will reduce critical thinking ability of a person in future. Negative response because maybe AI technology based writings, image, video etc will open our imagination window to think in different ways. (Johnston, 2022). Then, according to pie chart 4, almost 80% of people agreed and more than 20% of people disagreed with the fact that AI technology can perform error- free multi-tasks without any interruption and saves time. Negative response because, sometimes due to technical issues AI tools provide wrong outputs or take more time to generate results especially when it reaches to its highest capacity. (Babich, 2023). Next, according to pie chart 5, 65.7% of people agreed and 34.3% of people disagreed with the fact that AI technology will be the best option for research and data analysis. Negative response because, sometimes AI tools provide wrong results or such results that have no existence in reality due to technical issues. (Pearl, 2022). bFinally, from pie chart 6 it is seen that, 45.7% of people agreed and 54.3% of people disagreed with the fact that AI technology will reduce crime rate in future. Negative response because, using AI tools it can affect privacy that leads to crime also on providing wrong data securities and policies get in trouble to catch criminals. (Quest,et.al., 2018).

Arguments and Analysis

The impression of AI on job opportunities is a topic of ongoing debate and speculation. Some experts predict that AI will automate many tasks and potentially result in job losses, while others believe that AI will create new jobs and enhance existing ones. AI can increase productivity and efficiency, freeing up employees to focus on higher-level tasks that

require critical thinking, reasoning, creativity, and interpersonal skills (Mukherjee,2022). AI technology plays an important role in the health sector by analyzing large quantities of medical data and can predict future health issues that help doctors to provide proper treatment on time. AI technology is also helpful in personalizing medicine and in drug discovery, analyzing health and genetic history that helps to identify new probable treatments for diseases. (Deranty,2022). Moreover, the reflection of AI technology is also observed in reducing crime rates. By analyzing crime data through AI algorithms, we can predict the time and place of probable crime, can detect fraud that helps us to enforce securities on time and to reduce money laundering, cybercrime etc. AI based- sensor, camera, facial recognition tool also helps to reduce criminal activities. (Daga,2022).

The use of AI tools is also observable in garment industries. It helps to give a virtual cloth wearing experience to a customer so that a customer can realize which cloth will suit him/her and enhance interest for online shopping. AI tools like- robots also help tailor to design cloth maintaining a balanced speed while cutting and sewing. AI helps optimize inventory management and logistics, ensuring timely production and delivery of garments, reducing wastage, and cutting costs. Also, AI robots equipped with computer vision can perform quality checks during production, detecting defects and ensuring consistent product quality. (Lu,2021). AI tools make a remarkable contribution in the agricultural sector. AI machinery helps to monitor crops growth, tells about soil quality, contamination level, to determine the genetic stability of crops by analyzing genetic data and to plough land in less time. Even, the crop's genome can be identified through AI algorithms by analyzing the crop's patterns and variations, then telling us the proper time of watering the crop and its growth conditions. These will help to yield all types of seasonal and disease free crops in less time. (Morgan,2022). Finally, we can say that AI technology helps to produce error free outputs, and gives unbiased decisions in less time. Therefore, it can be said that, within the next two decades, AI technology will be the cause of 50 percent job losses and rise of unemployment rates according to some experts.

Counter points

There are two sides to every story. AI and robots will adopt some jobs from people, but they will also generate new ones. It's true that AI has

the potential to automate certain jobs, particularly those that are repetitive and low-skilled, but it can also create new employment opportunities in different sectors including software development, statistics study, and machine learning. Since 2000, many manufacturing jobs have been slowly lost to robots and automation systems. Of which it is 1.7 million(Priest, 2021). AI, on the other hand, is projected to create 97 million new jobs by 2025(Balakrishna, 2021).The main reason AI won't take human jobs is that it cannot do all the work that a human does. There is a fine difference between a job and a task that is a combination of various tasks. Artificial intelligence tools can solve, and define problems but it is unable to classify the problem. Also, AI tools are unable to express emotional appeal in writings that a human does. In fact, humans are more needed to develop AI tools, new skills and other technological tools. Next, AI technology may increase the plagiarism rate in writings, reduce our critical thinking and reasoning ability as AI tools are doing all tasks no brainstorming is required(Balakrishna, 2021). AI programs are still prone to mistakes. When ChatGPT responds incorrectly to a specific question you ask, that is a hallucination. The machine can write replies that sound plausible yet are inaccurate and rarely admits ignorance. You might discover that the answer the AI produced was wholly incorrect only after the validation. (Babich,2023). But the advantages are more than limitations. Therefore, AI technology will not replace human jobs completely as it can't generate creative thoughts of its own that a human can do.

Solution

The proper use of AI tools needs to be known. Rather than thinking about plagiarism or a word of destruction we can use it to perform repetitive tasks so that we can get more time to solve other tasks. There are three probable solutions for AI that will not reduce job opportunities. According to Balakrishna (2021), the first is to emphasize the importance of problem solving. Regardless of automation, individuals who came forward to find more opportunities to develop and provide value improves worker skills and advances the possibilities of promotion. A WEF survey found that 94% of surveyed executives want their workers to develop new expertise at the workplace. Secondly, retraining is another way. An approach that is competent to all never succeeds since each worker's learning requirements vary in content, timing, intensity, and duration. Rather,

every worker needs to get the freedom to select their way of learning. Digital services like Google Career Certifications, Coursera, and Udemy are framing personalized microlearning to make them widely available (Balakrishna, 2021). Finally, inclusive learning is another area where adaptability and accessibility can support digital learning systems (Balakrishna, 2021). Hiring based on skills rather than degrees, recruiting talent with non-STEM degrees and hiring people from disadvantaged or marginalized backgrounds can increase the diversity and will not take away jobs fully.

Conclusion

Humans are still needed for certain elements, such as how to create value, how to understand people emotionally, and how to see things for what AI can't control. Understanding the difficulty makes humans stand out from the 99% and is irreplaceable. It will be better in the upcoming days, if mutual cooperation between AI tools and humans is observed as both of them are needed to generate error free work in less time. Overall, while AI may change the nature of some jobs, it's unlikely to completely eliminate employment opportunities in the future.

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Tasnim Kabir is currently pursuing a Bachelor of Science (BSc) in Biotechnology under BRAC University. Her academic interests include- Bacteriology, Gene therapy and Astronomy and hopes to bring out something new for the welfare of mankind through research. Apart from these, she is interested in writing, reciting poems, cooking and traveling.



Durba Saha is currently pursuing a bachelor of science in Biotechnology at BRAC University. Stem cells, nano-technology and arts are some of my sections of interest. She enjoys academic research activities and loves to learn new things every day. Apart from that, she is a dendrophile and creative person with inquisitive nature and a passion follower.