

University

ROBOTICS AND THE FUTURE OF JOBS

Student's Name and Surname

Course

Professor

Due Date

Robotics and the Future of Jobs

In a study titled "AI, Robotics, and the Future of Jobs," Aaron Smith and Janna Anderson state that "Throughout history, technology has been a job creator – not a job destroyer."¹ In such a sense, one should say that the process of robotization and automation of the workforce that started almost a century ago reached an entirely new level in the modern world. On a daily basis, people can witness how automated machines excellently execute different repetitive tasks, boosting manufacturing and increasing rates of production exponentially. However, while automatization and robotization present apparent benefits, many people fear that in the future, there will be no jobs left that cannot be done by robots. As a result, one may assume that automatization and robotization can lead to an environment where human labor will become obsolete. As a result, research intends to target the hypothesis of whether the future of jobs influenced by robotics and automation will have a negative impact on humans, or in contrast, will become a booster of the economy, making it possible for people to avoid old-fashioned labor that involves repetition and predictability.

To test the hypothesis, comparative analysis methodology is utilized. Various reputable sources are analyzed to determine whether robotics and automation will have a positive impact on the future of jobs. However, even though there is no clear answer, there are prospects that can serve as a foundation for the discussion employed in this research. Finally, speaking about the significance of the target audience of the study, one should say that the topic researched has an inherent relevance, namely because it potentially affects everyone—mainly because job security is something that every person is looking for in the modern world.

¹ Smith Aaron and Janna Anderson, "AI, Robotics, and the Future of Jobs," *Pew Research Center* 6 (2014): 3.

As a result, after analyzing various sources, one should say that the massive rate of automation and robotization in the context of various jobs is visible today. According to the findings of the Pew Research Center, 48 percent of experts believe that the increasing rate of robotization will displace the majority of jobs, leading to the growth of income inequality, while 52 percent of experts argue that by the year 2025, technologies will not replace more jobs that it will create.² Going further, one should say that current examples of robotization show that many companies all over the world continually appeal to technologies. For instance, in the medical industry, robots assist surgeons in removing organs and cancerous tissue. In aviation, programs like DARPA have showed that machines are capable of piloting commercial airlines more efficiently than human pilots.³ Similarly, in banking and legal industries, artificial intelligence is often used as an analytical tool, which can make massive calculations in a fraction of a second.⁴ Not surprisingly, robots and computer programs can easily outperform humans in repetitive and predictable tasks. Following such logic, one should appeal to the study illustrated in the article titled "The future of employment: How susceptible are jobs to computerization." As a result of extensive research, the authors created a model predicting that people involved in transportation, logistics, and production sectors are the ones at risk of being displaced by robots.⁵ Appealing to similar studies, there is evidence suggesting that 17 percent of existing jobs will be displaced by

²Aaron and Anderson, "AI, Robotics, and the Future of Jobs," 2.

³Alex Williams, "Will Robots Take Our Children's Jobs?," The New York Times - Breaking News, World News & Multimedia, last modified January 20, 2018, <https://www.nytimes.com/2017/12/11/style/robots-jobs-children.html>.

⁴Forrester Research, "The Future of Jobs: Automation Technologies, Robotics, and Artificial Intelligence," ZDNet, last modified July 24, 2017, <https://www.zdnet.com/article/the-future-of-jobs-automation-technologies-robotics-and-artificial-intelligence/>.

⁵Carl B. Frey and Michael A. Osborne, "The future of employment: How susceptible are jobs to computerisation?," *Technological Forecasting and Social Change* 114 (2017): 44, doi:10.1016/j.techfore.2016.08.019.

automation and robotization by 2027.⁶ However, while the results of the research suggest that there are particular types of jobs and industries at risk of displacement, another side of the coin is that such displacement will allow people to avoid labor-intensive jobs requiring repetitive tasks, giving individuals an opportunity to concentrate on developing high-value skills.

In the context of the discussion, it is crucial to indicate that human-machine teaming is a critical factor. While being released from old-fashioned labor, which can be performed by robots more effectively and in a cost-efficient manner, people will have an opportunity to focus on developing cognitively demanding skills.⁷ Going further, the existing trends of robotization and automation show that while technology may replace particular kinds of jobs, it rarely serves as a substitute for people.⁸ As a result, the shift in the future of jobs will be made from technical to creative skills. In the article titled, "The Future of Jobs in the World of AI and Robotics," the authors argue that the robotization of jobs is a great opportunity for humanity. While avoiding doing repetitive tasks, working-class people will gain a chance to develop high-value skills revolved around creativity as well as the "learning quotient of an individual."⁹ Furthermore, speaking about the future of the jobs that cannot be replaced by robotization, one should say that professions involving empathy, creativity, and judgment are in the safe zone. Interestingly, the characteristics presented above constitute the very nature of a human being, making people not unique in comparison to robots, but also showing the necessity of shifting the professional scope from labor-intensive jobs to ones that are more integral to human nature. In the context of the

⁶Forrester Research, "The Future of Jobs ."

⁷Williams, "Will Robots Take Our Children's Jobs?."

⁸Tony Dundon and Debra Howcroft, "Here's What Robots Mean for the Future of Work," World Economic Forum, last modified January 18, 2018, <https://www.weforum.org/agenda/2018/01/heres-what-robots-mean-for-the-future-of-work>.

⁹University of Pennsylvania, "The Future of Jobs in the World of AI and Robotics," Wharton, last modified March 1, 2018, <http://knowledge.wharton.upenn.edu/article/future-jobs-world-ai-robotics/>.

results of the study, one can be assured that in the future, robots will assist people, making life easier. At the same moment, being relieved from repetitive and predictable tasks, people can focus on developing high-value skills. The only problematic factor in such a picture is that one cannot predict how robotization will affect the developing world. While the evidence presented in the research demonstrates the reality of the developed world, it seems that automation and robotization can make it harder for people in the developing world to earn a living. However, additional research is required to either prove or refute such a hypothesis.

Considering the entire content above, one should say that current trends of robotization, automation, and computerization show that machines are capable of outperforming humans in the majority of jobs that include computation, repetition, and manual input. However, while it may seem potentially dangerous for particular types of jobs and industries, as people may fear that their jobs will be displaced, the evidence shows that there is a high percentage of probability that robotization will reshape the future of jobs in a positive manner. Focusing on creativity, empathy, and judgment, people will gain an opportunity to improve crucial industries that have the most significant impact on the development of human civilization. Moreover, using robots as assistants, a particular mode of synergy can be created, making human input even more efficient. The biggest problem is that people who have jobs or work in the industries that are at risk of displacement should be granted viable options of specialization, meaning receiving an opportunity to develop skills that will ensure further job security.

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