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Keng SIAU

Singapore Management University, klsiau@smu.edu.sg

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Impact of Artificial Intelligence, Robotics, and Automation on Higher Education

TREO Talk Paper

Keng Siau

Missouri University of Science and Technology
siauk@mst.edu

Abstract

What is the future of higher education in the AI age? Higher education is expected to be challenged by AI, Robotics, and Automation on multiple fronts. First and foremost, AI, robotics, and automation are replacing and will continue to replace jobs and revolutionize every nation's economy and disrupt economic development in the world. Millions of jobs are expected to be replaced by machines (Zhao & Siau, 2017). Many manufacturing jobs have already been replaced by robots and middle class jobs may be taken over by AI in the near future (Siau & Yang, 2017).

The short and long term impact on higher education need to be studied and understood. In the short term (i.e., next 5-10 years), the higher education institutions will still need to train students for the industries. Not only must higher education in the short term research on AI, robotics and automation, but academics should also study the impact of advanced technologies on society, business, economy, and humanity. In the medium term (i.e., 1-2 decades), business disciplines such as accounting, auditing, finance, and marketing may be challenged. Those disciplines that have fixed and codable rules, policies, and processes can be automated. What can be automated will be automated! In the long term (i.e., after 2-3 decades, hopefully!), once artificial general intelligence (or strong AI) starts to emerge, students in higher education may be pursuing their interests and hobbies (e.g., arts, history, music, philosophy, political science) since many of the jobs that the students are training for now are staffed by robots!

In addition, with artificial intelligence, are professors and teaching assistants replaceable? What is the impact of AI, robotics, and automation on academic jobs and modes of pedagogy? These changes, which are likely to happen in the next few decades, are going to fundamentally change the teaching and research focuses of higher education. The higher education and the academic enterprises may need to be remolded as higher education may no longer be viewed as a means to employment or career advancement.

References

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