Artificial Intelligence Snatches Potential Careers in the Job Market

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How artificial intelligence is creating and taking jobs in the modern era. Artificial Intelligence today differs from the works of fiction that portray a robot ridden dystopian future. The concept of Artificial intelligence is explained through an examination of the philosophy of it. The Turing Test developed in 1950 by Alan Turing explains the idea of a machine thinking. Machines get smarter and faster every year. Machine labor is also much more cost effective than human labor and can increase production. Factory jobs are already fairly mechanized, but artificial intelligence might reach a point to where it can claim jobs that require complex thought. Jobs such as judges or nursing home aides. In a world where robots can do jobs usually delegated to humans there comes the unintended consequences of progress.

I. INTRODUCTION

The idea of artificial intelligence, often abbreviated as A.I., used to be relegated to science fiction. Today life with A.I. is a reality. Instead of the unintended consequences of technological advancement seen in movies, the actually impact of A.I. is more subtle. The advancement of A.I. has produced an unanticipated effect on the job market. Jobs once held by humans are now being delegated to machines. Businesses spend money and resources into developing ways to automate in order to lessen the demand for human employees who require paychecks and are not as efficient as a machine. While machines have lessened the demand for human labor before, they were not intelligent. Advances in computer science have allowed algorithms to become complex enough to emulate human thinking.

The job market has already begun to experience its ramifications. Teens and young adults are already shying away from careers that are likely to be inhabited by robots in the future. There are few students interested in keeping a job as a cashier or a truck driver, for example. Evidence of these jobs being replaced is already evident. Self-checkout lanes are already prevalent in many grocery stores and supermarkets. The only employees needed to operate these are a handful of overseer employees. Since these workers can be tied to more than one lane, this has already significantly decreased the number of jobs available in stores. In the future, there is no doubt that cashiers will be a thing of the past. Even the supervisors will not be necessary as A.I. technology advances and allows the self-checkout lanes to become even more self-sufficient. Truck drivers are soon to be replaced by self-driving cars. The technology is already here. Collision avoidance features, emergency brake assist, and autonomous cruise control systems are elements of self-driving cars that exist in modern cars. As time progresses, the technology will become cheaper and more and more cars on the road will become self-driving. When buying a self-driving car is cheaper than paying a truck driver a salary , human drivers will become obsolete.

II. TURING TEST

To understand the economic effect of A.I., the philosophy of A.I. must be examined. The Turing Test is an essential concept to the philosophy of A.I. that was developed back in 1950 [1]. The Turing Test is a thought experiment in which a person referred to as an "interrogator" is kept away from a person and a machine. The person and machine are referred to as X and Y respectively. The interrogator must then determine which is the machine and which is the person. In order to determine which is the person, the interrogator will ask the machine and the person questions addressed to each of them. They would be questions such as [1] "Will X please tell me whether X plays chess?". The objective for the machine is to be mistakenly identified as the person. [1] Turing made the following statement about the test:

"I believe that in about fifty years' time it will be possible to programme computers, with a storage capacity of about 10^9, to make them play the imitation game so well that an average interrogator will not have more than 70 percent chance of making the right identification after five minutes of questioning. … I believe that at the end of the century the use of words and general educated opinion will have altered so much that one will be able to speak of machines thinking without expecting to be contradicted."

III. Taking Jobs

Artificial intelligence is rapidly advancing and is expected to take over even more jobs in the future. Algorithms theoretically can replace nearly any job as long as they are advanced enough. Judges are expected to be superseded by A.I.. Judgment algorithms already exist in order to give bail suggestions to the judge. When these algorithms become complicated enough, they will be able to take into account criminal records and personal information of the defendant in order to make accurate decisions that are free from the biases of human judges. According to Anthony J Casey in "Self-driving laws" published to The University of Toronto law journal "not only are these algorithms more accurate than human judges, but they are also more objective, more consistent, and less prone to bias. … Over time, with increased acceptance, the algorithm will become the law. The algorithm will effectively replace the judge." Artificial judges are inevitable because they are able to ignore racial biases and are much more consistent in the judicial system. In "Robots in Retirement Homes: Applying Off-the-Shelf Planning and Scheduling to a Team of Assistive Robots" a plan is shown focused upon development of the algorithms that a set of robots will use in order to take care of residents in a retirement home. It considers the details and logic behind coordinating a group of robots to conduct reminders, telepresence sessions, and bingo games. The study shows that knowledge of artificial intelligence has already advanced to a point where these jobs can be replaced. The only factor stopping these jobs from being replaced immediately are the expenses required to put the robots into implementation. There is no doubt that in the future many jobs will be occupied by robots when it becomes cost effective.

Overall, breakthroughs in A.I. development are rapidly changing the economy. Just like how the Industrial Revolution made labor by hand obsolete, artificial intelligence is phasing out modern day menial jobs. Cashiers, truck drivers, and social workers are already beginning to feel the effects of the encroaching advancements of technology. Self-checkouts have reduced the number of employees needed to check out customers, self-driving cars are the precursor to driverless cars, and social work will soon be manageable by robots.

References

[1] Oppy, Graham and Dowe, David, "The Turing Test", *The Stanford Encyclopedia of Philosophy* (Spring 2016 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/spr2016/entries/turing-test/>.