Artificial intelligence and its future

Technology, Artificial Intelligence

Artificial Intelligence " is the ability of a human-made machine to emulate or simulate human methods for the deductive and inductive acquisition and application of knowledge and reason" (Bock, 182). The early years of artificial intelligence were seen through robots as they exemplified the advances and potential, while today AI has been integrated society through technology. The beginning of the thought of artificial intelligence happened concurrently with the rise of computers and the dotcom boom. For many, the utilization of computers in the world was the most advanced role they could ever see machines taking. However, life has drastically changed from the 1950s. This essay will explore the history of artificial intelligence, discuss the impact of artificial intelligence in society and touch upon where scientists want to take the study of artificial intelligence. AI will be used to as an abbreviation for artificial intelligence throughout the paper.

The field of study of Artificial Intelligence began in 1955 at Dartmouth College in New Hampshire with a proposal called, " A Proposal for the Dartmouth Summer Research Project on Artificial Intelligence". McCarthy, Minsky, Rochester, and Shannon coordinated the study. This proposal of thought goes far beyond the concept that computers can be used in the business world to increase productivity and the production of personal computers, all of which were being invented and discovered at that time. The four men believed that " every aspect of learning or…feature of intelligence can in principle be so precisely described that a machine can be made to stimulate it" (J. McCarthy, 1955). The proposal discusses a problem concerning the evolvement of artificial intelligence which still faces society today. The fact that " the speeds and memory capacities of present

computers may be insufficient to stimulate many of the higher functions of the human brain, but the major obstacle is not lack of machine capacity, but our inability to write programs taking full advantage of what we have" (J. McCarthy, 1955).

To further research for AI, CSAIL (Computer Science and Artificial Laboratory) was created by Minsky and McCarthy at MIT in 1959. At CSAIL new computer science tools were created in the development for artificial intelligence, such as LISP (list processing), artificial intelligence's programming language. McCarthy created LISP and it became one of the guideline computer algorithms for AI. (Artificial Intelligence and Robotics , 2015)

The early uses of AI were seen through robots. Through a robot body, one can utilize AI algorithms to portray individual thinking. The first general purpose robot is called Shakey. Developed at the Stanford Research Institute from 1966 to 1972, Shakey was the first robot to think in advance. For example, Shakey was able to understand a command such as turn off a light switch in a particular room. The robot would go through a corridor, find the room and then locate and turn off a light switch. Shakey could complete an action without the need of step-by-step instructions. The LISP software was used to program Shakey. The development of Shakey advanced AI concepts from the invention of the A search algorithm to the understanding of the full capabilities of robots. Shakey raised the public's awareness of computer science and artificial intelligence in the 1970s. Shakey moved public thoughts to questioning what machines could and will do in the future. (Artificial Intelligence and Robotics , 2015) To further the public's thoughts

about machine intelligence is IBM's Deep Blue Computer. Deep Blue won a chess competition against famous chess champion Garry Kasparov. Deep Blue's win was one of the first real instances of the competition of humans versus machines.

When AI was first breaking out into a field of study at universities, the list of colleges that had the option to study AI was very short: Carnegie Mellon, MIT, Stanford, and the University of Edinburgh. (Artificial Intelligence and Robotics , 2015) Today, there are over 300 universities all over the world that have this field of study. The transformation of AI " in the last twenty years Artificial Intelligence has matured to a set of analytic tools that facilitate problem solving which were previously difficult or impossible to solve" (Gordon, 2011). So we move from implementing AI through just robotics to the integration of AI into society. Artificial intelligence is used in all aspects of the world today to solve problems and create easier solutions. A common example of AI is interactive maps and direction applications. The development of search algorithms has made human life increasingly easier. Examples of other types of AI in society are everywhere from as small as the ability to remove a red-eye in cameras to as large as self-driving cars, maybe a little less common at the moment.

AI has evolved into automating many aspects of a human's everyday life. Many advertising companies utilize AI to personalize content based on the user's browsing history, and large companies will automate their answering service to reduce the need for more workers and speed up phone time with the workers. Furthermore, AI has created a more efficient and productive

society. Scientists are already thinking, acting upon and creating new forms of AI for the future.

AI is challenging definitions that used to be concrete. What does intelligence mean: Merriam-Webster defines it as, " the ability to learn or understand or to deal with new or trying situations," yet Merriam-Webster also defines intelligence as " the ability to perform computer functions." With that said, that places machines and humans on the same level, yet humans definitely see themselves above machines. An overarching question for those in the computer science and artificial intelligence field is, will AI technology advance to a point where humans lose control? Computer scientists want to go further than where AI currently encompasses. Presently, AI has overtaken many human roles in society going back to the question of whether humanity is obsolete.

John McCarthy said, " the artificial intelligence problem is taken to be that of making a machine behave in ways that could be called intelligent if a human were so behaving," but society needs to go further. Shyam Sankar, named by CNN as one of the world's top ten leading speakers, says the key to AI evolvement is the improvement of human-computer symbiosis. Sankar believes humans should be more heavily relied upon in AI and technological evolvement. Sankar's theory is just one of the many that will encompass the future innovations of AI. The next phase and future of AI is that scientists now want to utilize both human and machine strengths to create a super intelligent thing. From what history has taught us, the unimaginable is possible with determination. Just over fifty years ago, AI was implemented

through robots completing a series of demands. Then it progressed to the point that AI can be integrated into society, seen through interactive interfaces like Google Maps or the Siri App. Today, humans have taught machines to effectively take on human jobs, and tasks that have created a more efficient world. The future of AI is up to the creativity and innovation of current society's scientists, leaders, thinkers, professors, students and entrepreneurs.