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Artificial Intelligence

Artificial intelligence, or AI, is the replication of human consciousness and intelligence using modern technological advances (Whitson). One of the most impressive types of artificial intelligence is when it is designed to carry out thought processes similar to humans and learn from events and stimuli (Keating 29). A prime example of this type of artificial intelligence is IBM’s Watson, a robot capable of processing medical information and producing a verdict (Keating 30). However, this is not the only form of artificial intelligence. In fact, the average person interacts with an AI at least once a day through the usage of language translation, traffic light coordination, or with smart phones (Whitson). The supporters of this form of technology believe in a bright future where humans actually fuse themselves with artificial intelligence (Makridakis 8). To obtain a better grasp of this foreign concept straight out of a sci-fi film, one must first understand the history of AIs, how this technology is used in today’s world, and the broad future for artificial intelligence.

The question of whether machines can be programmed and taught to think and mimic human thoughts began in the twentieth century (Cristianini). In 1950, a man named Alan Turing first proposed the very question that most artificial intelligence activists base their research upon, which is whether or not human-made robots can truly answer questions similar to a person (Norvig). Although Turing may not have solved this issue by himself, he did however create a platform on which research into AIs could stand. This, in turn, sparked the development of machines in the 1950s which were capable of playing board games such as checkers and chess (Bengio). It was not until 1956 when a group of scientists gathered at Dartmouth University and created the term “artificial intelligence” and made it into a field of study (Norvig). The next four decades after the initial spark of curiosity for machine learning were full of failures and dead ends (Cristianini). Even the simple goals of text understanding and speech recognition were not in reach until the late 1990s (Norvig). With all of these different categories, AI development began dividing into smaller fields of study, creating more specialized research (Norvig). A significant milestone that marked the point at which decades of hard work finally began to show was when Deep Blue, a robot created by IBM, beat a chess world champion by the name of Garry Kasparov (Cristianini). The 2000s were years of astronomical growth for artificial intelligence programmers, for they finally uncovered the most efficient way to create computer programs that learn and teach themselves (Bengio). Without this vital groundwork, further advances into the AI field of study would not have been possible.

In present day, one could argue that the world is beginning to look like what people in the past once saw as a future where artificial intelligence worked alongside humans. One prime example of this is with IBM’s latest creation, a robot named Watson (Norvig). This powerful computer has the ability to answer virtually any question it is asked with speech input (Norvig). While this is on the high end of the spectrum for AI development, there are tools used by the average person every day. Smartphones are becoming progressively more prevalent, which are some of the most advanced forms of AI in the world (Whitson). The apps on these devices, however, can sometimes be more impressive than the hardware they run on. Dickson states that medical apps, such as Ada and Your.MD, ask the user certain questions and determine what may be wrong based off of this information ("How Artificial Intelligence Is Revolutionizing the Mhealth Industry."). These pocket assistants are creating a pre-primary care field where patients can learn possible causes to symptoms and be told whether or not emergency medical attention is required ("How Artificial Intelligence Is Revolutionizing the Mhealth Industry"). He also goes on to say in another article about how artificial intelligence is creating jobs rather than eliminating them ("Artificial Intelligence Creates New Job Opportunities"). Possibly Dickson’s strongest argument is the fact that while AIs may be performing tasks that humans once did, these machines still require maintenance, and specialized jobs are coming into focus requiring tech savvy individuals to fill them ("Artificial Intelligence Creates New Job Opportunities"). Alongside all of this, computer vision and speech recognition are becoming more noticeable in society (Bengio). Computers are now capable of identifying objects in pictures with ease and extreme accuracy, while human speech recognition is being used in Google and smartphone communication, eliminating the need to text (Bengio). With the technological strides that are being made in the AI business, the future looks bright for artificial intelligence optimists everywhere.

The fact of the future being closely entwined with artificial intelligence development is undeniable given the amount it has flourished over recent years (Bengio). There are two basic beliefs to the AI argument. One is the belief that humans will live in almost perfect harmony alongside these so-called assistants and eventually will have very little in their lives that is not somehow connected to AIs (Makridakis 8). These people are known as the Optimists (Makridakis 8). Makridakis suggests that this is where drastic theories of how people will be able to infuse themselves with AIs are born out of, alongside the view of possible immortality through the aid of machinery (8). The nearly polar opposites to this group are the Pessimists. The fear of having technological overlords is a theory created and publicized by this anti-AI group (Makridakis 9). Their basis of understanding sits upon the argument of humans eventually becoming inferior to machines and not being able to control them if they become self-aware (Makridakis 9). While there are also supporters of AI development reaching the point of a dead end and fizzling out, or this technology being caused by the demons, the majority of views pertain to either the Optimists or the Pessimists (Makridakis 8-10).

In conclusion, artificial intelligence plays a large role in the lives of many people already, even in this stage of its development (Whitson). The majority of research and experimentation has taken place over just the last two decades; however, the hope of machine learning has been around since the 1950s (Norvig). Present day implementation of AIs has been more and more noticeable with things such as smartphones rising to fame and becoming vital parts to the average person’s life (Whitson). Whether someone associates themselves with believing in a utopian society fueled by machines or sides with the theory of computers making the human race practically extinct, the fact that artificial intelligence will change the future of the world is hard to disprove (Makridakis 8-9). Understanding artificial intelligence requires extensive knowledge of the past research attempts, how it is currently being used, and where the future of AIs may lead the world.

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