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Artificial Intelligence: The Impact it has on American Society

By

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B.S., Governors State University, 2019

THESIS

Submitted in partial fulfillment of the requirements

For the Degree of Master of Science
With a Major in Computer Science

Governors State University
University Park, IL 60484

2022

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Abstract

The goal of this paper seeks to look at Artificial Intelligence (AI) influences and impacts on society in the United States. It focuses on the challenges and opportunities of AI, the current state of AI, where AI may advance to in the future, how far AI will go and the way people view it, the positive impact of AI on society, and the breakdown of nine ethical issues in artificial intelligence.

Keywords: artificial intelligence, "artificial intelligence" "current state", "Artificial Intelligence" "negative impact", "artificial intelligence" "United States", AI misleading, AI impact on the industry, Artificial Intelligence's Impact on American Society, The Challenges and Opportunities of AI, and "Artificial intelligence", "Quantum".

CHAPTER 1

What is Artificial Intelligence?

Every person's meaning of artificial intelligence is unique. In 1956 the term AI was first created by a scientist called Marvin Minsky at Dartmouth college. In the same year, John McCarthy was the first to embrace artificial intelligence at the Dartmouth Conference and it was developed for the first time as an academic (Great Learning Team, 2022). John McCarthy is an American computer and cognitive scientist who define AI as the science and engineering of making intelligent machines and arranged the first international conference at Dartmouth, New Hampshire. John McCarthy is considered one of the founders of artificial intelligence, together with Alan Turing, Marvin Minsky, Allen Newell, and Herbert A. Simon. AI-enabled devices exhibit reasoning, knowledge, planning, learning, communications, perception, and the ability to move and manipulate objects.

Several years ago, in 2013, there was no general agreement regarding the definition of intelligence. Many researchers in AI agreed that intelligence involves reasoning, using strategy, solving puzzles, making judgments under uncertainty, representing knowledge, including common sense knowledge, planning, learning, communicating in natural language, and integrating all of these skills toward common goals. So, there were two main categories in AI in 2013. First, systems behave and think like humans. Machines with minds capable of decision-making, problem-solving, and learning, require intelligence (van de Gevel, Noussair, 2013). It is important to note that these definitions measure success based on devotion to human performance. Second, systems assess success in terms of an idea concept of intelligence, i.e., a method is intelligent if it takes the

best possible action given what it knows. In accordance with Van de Gevel: Noussair, using computational models, these systems can perceive, reason, and act.

It is necessary to understand that AI is a broad term that covers different technologies and is used to describe intelligent systems that are comparable to humans. Quoted by Brown The terms — “Artificial” and “Intelligence” means a “human-made thinking power”. AI is a branch of computer science that combines human intelligence with machines so that such systems or machines can think and act like humans do (but not exactly). In other words, all machine learning is AI, but not all AI is machine learning. For example, symbolic logic – rules engines, expert systems, and knowledge graphs – could all be described as AI, and none of them are machine learning. According to (Nicholson, 2022), A machine learning algorithm can be a jumble of if-then clauses, or it can be a complex mathematical model that maps raw physical data into symbolic categories. As if-then statements are explicitly programmed by humans, they are rules. If-then statements such as these are sometimes referred to as rules engines, expert systems, knowledge graphs, or symbolic artificial intelligence. Collectively, these are known as Good, Old-Fashioned AI (GOFAI). The intelligence that rules engines mimic could be that of an accountant with knowledge of the tax code in the US, we call that TurboTax. Machine learning differs from knowledge graphs and expert systems in the way that it can modify itself when exposed to new data, i.e., it requires no human intervention to make certain changes. Therefore, it is less brittle and more independent from human experts.

AI training data sets are handled through machine learning algorithms. There are three terminologies typically used interchangeably and are linked to each other such as artificial intelligence(AI), machine learning(ML), and deep learning(DL) cause confusion among many people around the world. DL is compelling in today’s AI boom due to more complex inputs and

output. However, each is unique in its way in particular, when it comes to its applications, capabilities, and results. These terms have made it impact on American Society. Nevertheless, Understanding the differences between AI, machine learning, and deep learning is crucial for using the language correctly and making the right decisions when working on AI, machine learning, or deep learning projects. The fig.4 below is showing how these three terminologies relate to one another and how different from each other. The circle also shows that AI is a wider area than ML - -- ML is the branch or subset of AI, and lastly deep learning --- which is a part of the subset of ML.

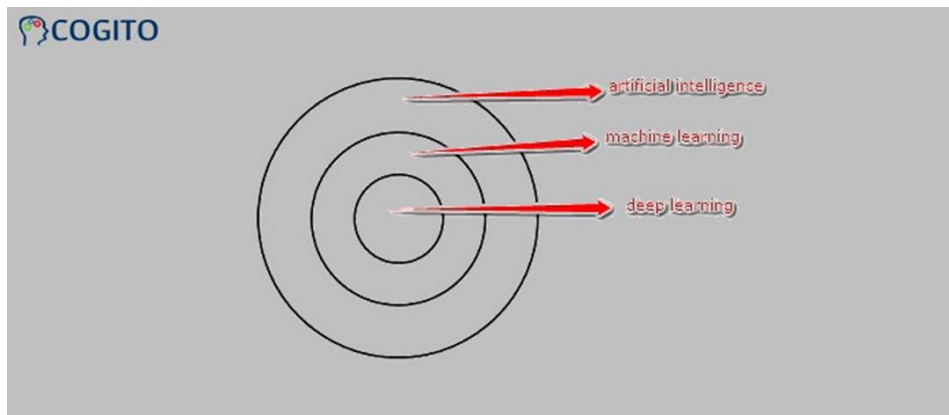
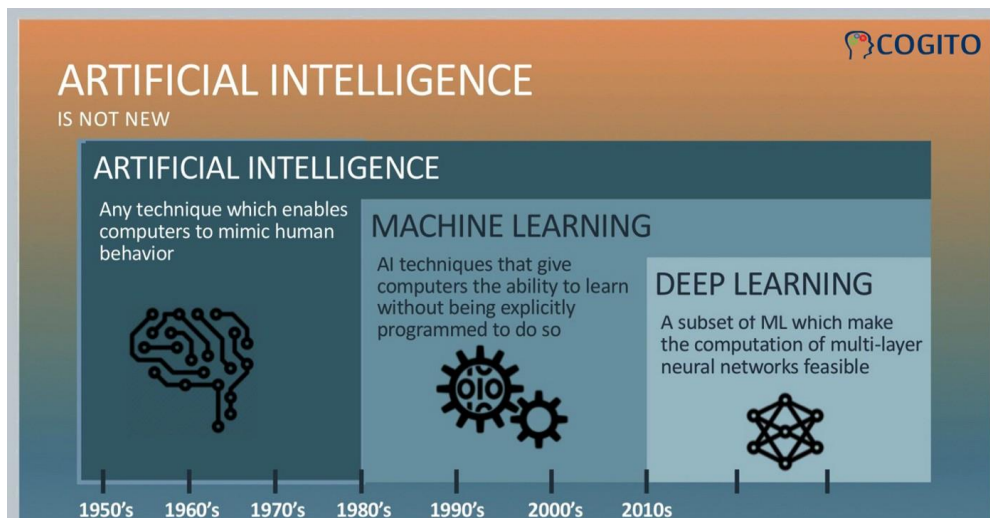


Fig 4. Note. Reprinted from “All That AI is ML but Not All That is AI is ML”

by Brown, R., 2020

Next Fig 5 shows the definition of AI, ML, and DL. It gives the years of each one when they were started.



*Fig 5. Note. Reprinted from “All That AI is ML but Not All That is AI is ML”
by Brown, R., 2020*

Some of the technologies in the year 2020 include machine learning, deep learning, natural language processing, speech recognition, image recognition, and robotics; these technologies belong to subcategories of AI, which often have subcategories of their own. All of this is artificial intelligence (AI). Symbolic artificial intelligence was the leading concept in the AI community from the post-War era until the late 1980s. Now we have three categories of artificial intelligence. They are ANI, AGI, and ASI.

These are three categories of AI:

- Artificial narrow intelligence (ANI)
- Artificial general intelligence (AGI)

An ANI machine performs and defines a specific function or a limited range of tasks. ANI will make independent decisions that outperform people that specialize in that field. ANI subcategories have achieved good agreement for people to interact with them regularly; only a few are widely accepted (Patrick, 2020).

AGI is a machine that thinks independently as a human would. Using a device of this kind will be able to learn to solve any number of problems without human input and adapt and evolve autonomously. This type of AI only exists in fiction and not in the real world (Patrick, 2020). In the year 2020 Byron Patrick believed that you can only find a machine that thinks independently as a human would in fiction and it has yet to exist in the real world.

However, AGI has not been fully achieved, there is research that has made entry points into it (e.g., “Sophia, world’s first AI humanoid robot” and the like). So, it might be considered to

exist to a limited and growing degree. On July 18th, 2021, Dora Bajkuša summarizes it all about Sophia the robot:

- Hanson robotics activated her on Valentine's Day of 2016.
- She first appeared in public at the Texas SXSW festival in mid-March.
- In October 2017, she became a Saudi Arabian citizen, which made her the first robot to receive citizenship in any country.
- She also became the first non-human that got the UNDP's Innovation Champion Title in November 2017. There is a picture below showing what she looks like (Fig 3).



Fig 3. Note. Reprint From "Is Sophia a Scram and did They Kill Her?"

By Dora Bajkuša

- Artificial Superintelligence (ASI)

The third type of artificial intelligence is called artificial superintelligence (ASI). As opposed to human intelligence and behavior mimicking artificial intelligence (AI), artificial superintelligence (ASI) is a situation in which machines become self-aware and outperform human intelligence and capability. According to Escott, in 2017, many people have grown paranoid about an AI takeover's certainty and closeness because of its powerful capabilities and rapid growth of AI. It is unlikely that super intelligent AI will demonstrate human emotions or become malicious, and we have no reason to expect it to. Two critical scenarios are most likely when considering how

AI might become a risk. First, AI could be programmed to do something devastating, and second, AI could be programmed to do something beneficial but develop a destructive method for achieving its goal. Artificial Super Intelligent would be highly efficient at achieving its goals. Nonetheless, if we expect to maintain some level of control, we will have to make sure these goals align with ours.

These are other ways some people view AI definitions during the years 2021 and 2022: The industry collectively describes it as a collection or group of technologies capable of coming together to permit machines to act with human-like degrees of intelligence (Accenture, 2022). AI is not one idea but rather gathers various technologies to allow the device to sense, comprehend, act, and learn at human-like intelligence levels (Accenture, 2022).

AI is a broad term covering the different subcategories of technology. There were two tech inventors, Ian Hogarth and Nathan Benaich who took a microscope look at the global artificial intelligence playing field. They define AI as: “a multidisciplinary field of science and engineering whose goal is to create intelligent machines (Raza, 2021).” AI is also distinctive and revolves around other types of machinery or mechanisms (ITU, 2021). Nevertheless, the three main AI types, ANI, AGI, and ASI, have been broken down into three categories. By breaking down these three categories this idea will allow a layperson to understand what artificial intelligence is a little easier by showing the three types of AI and a simple explanation that a layperson could understand. These details may help them to be able to venture out into technology because we need more people learning technology.

John McCarthy, back in 1950 said, every aspect of learning or any other feature of intelligence can in principle be so precisely described that a machine can be made to stimulate it. An attempt will make machines use language, form abstractions, and concepts, solve problems

now reserved for humans and improve themselves (Sunil Kumar, 2019). Looking back on how McCarthy described artificial intelligence and how today, many machines and devices are using voice recognition, plus face recognition, we see that AI has improved so much since the 1950s.

Four more types of artificial intelligence were found in Information Technology. According to Joshi and the cognitive world, this criterion, AI can be usually classified in two ways. This is one type, AI and AI-enabled machines are categorized in one type based on their similarity to human minds and their capability to “think” and possibly even “feel” like human beings. AI or AI-based systems can be classified into four types: reactive machines, limited memory machines, theory of mind, and self-awareness machines.

Reactive machines - has no memory, and only respond to different stimuli.

Limited memory - uses memory to learn and improve its responses.

Theory of mind - understands the needs of other intelligent entities.

Self-awareness - has human-like intelligence and self-awareness.

The second “alternate system of classification that is more generally used in tech parlance (jargon) is the classification of the technology into Artificial Narrow Intelligence (ANI), Artificial General Intelligence (AGI), and Artificial Superintelligence (ASI) (Joshi. 2019).”

AI's place in our society

Artificial intelligence (AI) will transform the opportunity for jobs in the United States, but the consequences will be distinct across areas (such as rural and urban) and businesses. Nonetheless, that does not remove or change the point that a solid portion of country districts still lacks the foundation necessary to implement speedy Internet, making it difficult to attract high-level positions in these districts. AI will lead to increased levels of skills efficiency, specializations in job roles, and the increased importance of “human” like creativity, problem-solving, and quantitative skills (Jain,2021). AI will dramatically impact many white-collar jobs and services that have been relatively safe from automation. Therefore, office support and food service jobs are the most at risk of automation.

The modern world depends increasingly on artificial intelligence to function economically and socially. It is possible to view AI as a system or method of economic growth and productivity (Szczepanski, 2019; Jain,2021). One concern is that it may establish ultra-wealthy firms generating enormous wealth and knowledge, adversely affecting the economy (Szczepanski, 2019). But there is another concern here in the United States where economic growth will not distribute evenly in the rural communities. Hence, it may also result in a broader gap between developed and developing countries and result in a greater demand for workers with specific skill sets and simultaneously displacing or eliminating others; this could have a significant impact on the labor market, including here in the United States (Szczepanski, 2019; Jain,2021). It is a valid concern, but no one knows how far the risks will go. Even though artificial intelligence has adverse effects, it is possible to minimize these effects by carefully crafting policies to encourage its development.

State of the Problem.

How far will artificial intelligence go in the future, and will there be no end? As Thomas defines, AI is predicted to have a lasting impact on every industry. Thomas is a tech writer and editor at Built-in, a freelance journalist and author at Villard/St Martin's Press, a staff writer, and a reporter at Chicago Sun-Times. He is located in Chicago IL, United States, and got his education from John Carroll University, Bachelor (English) in 1992. Who wrote the article The Future of AI: How Artificial Intelligence Will Change the World?

So, no end to artificial intelligence, but who knows how far it will go? Where will this leave the people who are not tech-savvy or may not have the ability to learn technology? According to Bossmann, in addition to being motivated, these people can use this option to engage in non-work activities such as taking care of their families, contributing to, and interacting with their communities, and finding new ways to make a different society.

Nevertheless, AI technology can be good or bad, or misleading. AI systems are either good or bad, depending on the quantity of information and the performance of AI systems is determined by how much data is used to formulate or organize. As a result, the key to expanding a sound AI system would be acquiring good knowledge.

The New Deal for Consumers points to the ineffectiveness of existing means of combating unfair commercial practices and incredibly misleading advertising (Pusztahelyi, 2020). Therefore "one relevant field of protective public law measures is misleading or manipulative advertising as unfair commercial practices within the broad context of the consumer protection law (Pusztahelyi, 2020)." Artificial intelligence's impact on our society can be negative or positive.

CHAPTER 2

The Current State of AI.

According to Erin and Ariana, (2019), “Businesses struggle to fill critical skilled roles in STEM occupations and thus suffer sluggish growth. Some estimate up to 2.4 million STEM jobs go unfilled (“The STEM Imperative,” 2018). College graduates in STEM fields struggle to find jobs. Those without a postsecondary degree can barely achieve a family-sustaining wage. Technology and automation are rendering human workers obsolete across industries (Korinek & Stiglitz, 2017; Autor & Salomons, 2018).”

A workforce crisis is threatening economic competitiveness and national security in the United States and is on the verge of a revolution in work, with technology accelerating innovation and fostering opportunity beyond our wildest dreams. Since the industrial revolution, the proportion of STEM (Science, Technology, Engineering, and Mathematics) jobs has doubled. Every day, new jobs and entirely new fields are being created. It is estimated that 65% of children entering elementary school today will end up working in entirely new jobs that are still unimaginable to us (types of jobs that are not on our radar yet (Pethokoukis,2018)). In today's market, job seekers have more choices than ever before, and advanced skill sets are in high demand. A greater portion of students are attending college than ever before, and STEM graduates earn more than those in non-STEM fields by 12-30% percent across all educational levels.

The current state of AI has dramatically advanced. It has been making critical progress in various businesses and fields worldwide for the past half-decade or more (Rosso 2021). Not only worldwide but also in the United States has highly progressed. AI has made progress; In major areas, but they still need to be progress made in the rural regions of the United States. Therefore, according to Jain, in 2021, there will be a vast digital divide between rural and urban residents:

24% of rural adults report having difficulty accessing high-speed internet, whereas only 13% of urban residents say the same issue. Most jobs are held by individuals without a college degree, with more than 90% of food service employees and more than 60% of office support workers having just a high school diploma. According to Rosso, artificial intelligence has improved and has had a real-world impact on people, institutions, and culture in the last five years. Such as from 2016 to 2021, progress has been made in all of AI's standard sub-areas, such as speech recognition and generation, decision-making, and integration of vision and motor control for robotics, and natural language processing (understanding and generation), image and video generation, multi-agent systems, planning. AI has also been used in the healthcare sector, including medical diagnosis, language translation, games, independent driving, and interactive personal assistance.

Bias also deals with the current state of AI. Today, our society talks about bias and how it can affect our institutions such as Twitter, Facebook, media, etc. Plus, this is the one where many columnists and authors talk about whether it can harm us or not. AI has drawbacks, mainly related to ethics and misinformation. People tend to think of AI as merely an automation technology, and observers feel AI automated processes are biased (Newman, 2020). AI can be a handy tool, and it can be misused inadvertently to accomplish harmful or unintended purposes (ITU, 2021). In accordance with Marr, Artificial intelligence algorithms are created by humans. They can contain bias resulting from those who unintentionally introduce them, and AI algorithms built from partial data or data trained from biased sources will produce biased results. However, this response is especially problematic when emotion-based artificial intelligence may affect vulnerable and susceptible individuals in a way that will negatively affect their ability to make intelligent decisions and their freedom of choice. Therefore, the transparent or non-transparent method may slightly influence a person's decisions (Marr, 2021). Emotional AI offers enormous potential in

advertising since it may influence consumer decisions subliminally, without the consumer being aware of it. The impact of digital technologies on consumer rights will increase as these technologies provide more sophisticated means and techniques for large businesses to operate in an online environment.

Our country had a problem in 2020 and 2021 with voting rights and COVID. This was due to people in our country getting enormous amounts of data from their TV, computer, and smartphones. The elections in 2021 had a lot of misleading information from the media, such as using dead people's names, voting twice, and saying that illegal people were voting, plus more misleading information. Regarding COVID, we had a lot of information that was misleading to the people on some media platforms, such as not needing to wear your mask, how you will be affected, not needing to take the shot, and other misleading information. Nonetheless, some media, such as the TV, Twitter, and Facebook, used misinformation or misled people to believe that it would be an unlawful and illegitimate vote count. This stirred up a lot of confusion among some people who thought they were telling the truth.

So, AI can be misleading. It depends on the data of what a person is writing which can be misleading. Therefore, due to people's information on Google, Twitter, and Facebook platforms. Yet, in the economy, we have enormous amounts of data in our society to read or hear until it becomes confusing to the people. It does not matter if a person with high education or no education tries to understand the information broadcast by people who use the platform of Google, Twitter, Facebook, TV, and other media that put out negative, positive, or misleading information. It can be challenging to understand.

Technology based on quantum theory promises revolutionary and disruptive innovations for a wide range of industries. Quantum computing will contribute to artificial intelligence and

impact every economic sector, from healthcare to national security. There is a shortage of workers who understand quantum technologies and have the necessary technical skills (Science Teacher, 2021).

AI Advancement in the Future.

Artificial Intelligence (AI) is moving so fast and in so many areas, such as computers, smartphones, science, fishing, technology, airplanes, smart home devices, drones, and smart cars, and I could go on forever and ever naming all the areas that AI relates to. Whereas, Marr in 2020 talks about the intelligence revolution transforming businesses with AI. According to Marr, the first three industrial revolutions were steam, electricity, and computers. Now, we are amid a fourth industrial revolution-what he likes to call the intelligent revolution. The intelligent revolution is driven by AI, big data, and other related technologies. The intelligence revolution will transform every business in every industry and our daily lives. Every business must get ready for this revolution (pp. 10). This will be part of our future for AI, The Intelligence Revolution.

As reported by Joshi, using artificial intelligence (AI) and big data, organizations can predict upcoming trends in key industries including business, technology, finance, and healthcare. AI refers to computer programs that simulate human intelligence. Making machines 'intelligent' by using machine learning algorithms allows them to make decisions based on the information they receive. The term "Big Data" is often used to describe techniques and strategies for exploring large sets of data in order to extract knowledge. Data analytics can be used to make strategic decisions and improve business outcomes by capturing and storing data and then analyzing the data, this is all part of big data technology. To develop machines that can think for themselves and use big data, companies deploy AI in silos (storage towers). Though, big data is what AI relies

upon and it is the raw material for AI. In other words, when big data and AI are combined, they can change everything from the way data is structured to the way machines learn.

Big data is characterized by greater variety, coming in increasing volume, and with more velocity (The three Vs. of big data (Fig 1). Even though big data itself is relatively new, large data sets date back to the 1960s and 1970s, when the world of data started with the development of relational databases and when data centers were just getting started.

The three Vs of big data

Volume	The amount of data matters. With big data, you'll have to process high volumes of low-density, unstructured data. This can be data of unknown value, such as Twitter data feeds, clickstreams on a web page or a mobile app, or sensor-enabled equipment. For some organizations, this might be tens of terabytes of data. For others, it may be hundreds of petabytes.
Velocity	Velocity is the fast rate at which data is received and (perhaps) acted on. Normally, the highest velocity of data streams directly into memory versus being written to disk. Some internet-enabled smart products operate in real time or near real time and will require real-time evaluation and action.
Variety	Variety refers to the many types of data that are available. Traditional data types were structured and fit neatly in a relational database . With the rise of big data, data comes in new unstructured data types. Unstructured and semistructured data types, such as text, audio, and video, require additional preprocessing to derive meaning and support metadata.

Fig 1. Note. Reprinted from “ How Big Data and Artificial Intelligence can Create New Possibilities”, by Joshi, N., 2022

AI affects all industries and all humans. In recent years, artificial intelligence has played a leading role in advancing technologies such as big data, robotics, and the internet of things (IoT). What is IoT? “The term IoT, or Internet of Things, refers to the collective network of connected devices and the technology that facilitates communication between devices and the cloud, as well as between the devices themselves (AWS, 2022).” The country will continue to inspire technological advancements for a long time (Thomas,2021).

The future of AI according to Accenture's report, AI: Built to Scale, 84% of business executives believe they need to use AI to achieve their growth objectives. However, 76% acknowledge struggling with how to scale AI across their business. Artificial Intelligence is dramatically transforming our current lives. AI's impact is everywhere, such as in transportation, manufacturing, health care, education, media, and customer service.

AI will allow humans to focus on high-value tasks by replacing manual tasks that are tedious and time-consuming. According to experts, leaders, and scientists, predict that AI will destroy human jobs, resulting in unemployment. Therefore, no matter what the predictions may say, technological advancements have benefited humans in multiple ways. In addition to the various instances in which AI has replaced manual work interactions, the following chart shows a percentage breakdown of the different types of artificial intelligence functions used in companies and the United States (Fig 2). Shortly, artificial intelligence will change virtually all manual interactions across industries, moving workers into areas where humans still play a crucial role in making final decisions (Joshi,2022).

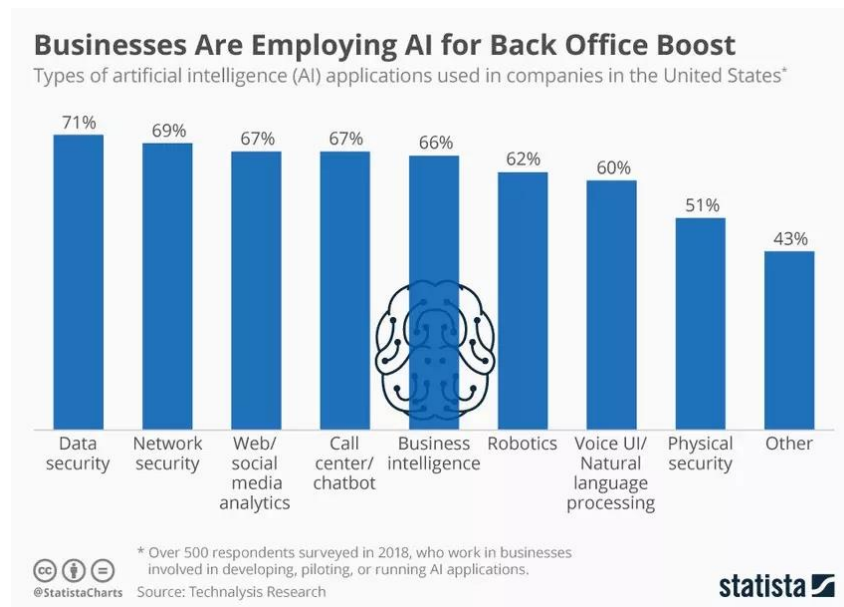


Fig 2. Note. Reprinted from “Is it Time to Replace Manual Work Interaction with AI”,
by Joshi, N., 2022

These are the top nine new technology trends for 2022. What does this mean to stay current with emerging technologies and the latest technology trends? It means keeping an eye on the future also means learning what skills you'll need to acquire to get a safe job tomorrow and even how to obtain it (Duggal, Apr 7, 2022). The following new technologies will create many jobs, which include:

- Artificial Intelligence and Machine Learning,
- Robotic Process Automation (RPA),
- Edge Computing,
- Quantum Computing,
- Virtual Reality and Augmented Reality,
- Blockchain,
- Internet of Things (IoT),
- 5G

- Cyber Security.

The Challenges and Opportunities of AI.

Artificial intelligence possesses both transformative power and challenges, including issues of transparency, trust, security, and concerns about job displacement and exacerbating inequalities. Even though AI faces many challenges, there are equally many opportunities. This table will provide a summary of the challenges (Table1).

<i>The challenges of AI for 2021</i>	
<p>The bias of AI Algorithms. If developers develop AI algorithms with biased minds, they may show biased results. The actual users cannot be sure that the decision-making processes run pretty as there is no transparency about how they operate in the background. As a result, the algorithms can produce biased results (Abdoullaev, 2021).</p>	<p>Poor Governance & Accountability. It can be difficult to assign blame or accountability to an AI system or product when it behaves unethically. In the past, governance processes dealt with static functions. AI and data processes are iterative. Our governance process must also be able to change and adapt accordingly (Abdoullaev, 2021).</p>
<p>Lack of Privacy. Most companies are fond of data, and they like to keep it. Data collection by companies without permission puts citizens’ privacy at risk - a practice that is made easier with artificial intelligence. The algorithms used for facial recognition are widely used in different applications and products worldwide. Such products gather and sell a great deal of personal information without the customer’s consent (Abdoullaev, 2021).</p>	<p>The Curse of Data Annotation. Technology companies train their computers using labeled data, which constitutes a substantial part of artificial intelligence. Annotating data and tagging it requires a large workforce, and tech giants such as Google and Facebook hire this huge workforce, who spend hours marking data. In this case, the irony is that the technology industry is attempting to create more intelligent systems yet will entail substantial manual labor (Abdoullaev, 2021).</p>
<p>No Transparency. The complex programming of artificial intelligence products makes it difficult for the average person to understand their concept. The algorithms behind most AI-based products are entirely confidential to avoid security breaches and other threats. The internal algorithms of AI products are not transparent. This makes it difficult for customers to trust such products (Abdoullaev, 2021).</p>	<p>Massive Training Datasets. As AI-based applications progress, not only do they need labeled data, but vast amounts of data as well. There are many significant players in AI, such as Amazon, Google, Facebook, and so forth. They are leading because they have access to so much data. Most companies do not have access to large amounts of data (Abdoullaev, 2021).</p>
<p>Quality of Data. Data quality includes several aspects, such as consistency, integrity, accuracy, and completeness. Modern systems should consider the quality of the data input and output. Clients and production components should be instantly notified of potential issues and avoid exposing dirty, inaccurate, or incomplete data. Even if a sudden problem results in poor quality data entries, the system will handle the situation and alert the users. It might deny serving data to its clients - or help while raising the alert/flagging the potential issues, depending on how critical the problems are (Abdoullaev, 2021).</p>	<p>Trust Deficit. Deep learning models are prone to errors because they do not understand how they predict the outcomes. This is a significant cause of concern for AI. For a layperson, it is difficult to know how a specific set of inputs can come up with a solution for different kinds of problems. Many people have no idea, unaware of its existence or usefulness, that artificial intelligence occurs and how it is integrated into everyday items such as smartphones, Smart TVs, banking apps, and even cars (Vadapalli,2022).</p>

Table 1. Challenges of AI

The table below provides a summary of the opportunities (Table 2).

Opportunities of AI for 2022	
<p>User Experience. Work with products to help customers understand their functions and use them efficiently. Understand how people use equipment and how computer scientists can apply that understanding to produce more advanced software (University of San Diego, 2022).</p>	<p>Research Scientist. Expert in applied math, machine learning, deep learning, and computational statistics. They are expected to have an advanced degree in computer science or an advanced degree in a related field supported by experience (University of San Diego, 2022).</p>
<p>Researcher. Computer science and AI research. Discover ways to advance AI technology (University of San Diego, 2022). Data Scientist. Collect, analyze, and interpret datasets (University of San Diego, 2022).</p>	<p>Data Mining and Analysis. Finding anomalies, patterns, etc., within large data sets to predict outcomes (University of San Diego, 2022). Natural Language Processing. Chatbots. Virtual assistants (University of San Diego, 2022).</p>
<p>Software Engineer. Develop programs on which AI tools function (University of San Diego, 2022). AI Engineer. Build AI models from scratch and help product managers and stakeholders understand results (University of San Diego, 2022).</p>	<p>Machine Learning Engineer. Using data to design, build, and manage ML software applications (University of San Diego, 2022). Business Intelligence (BI) Developer. Analyze complex data sets to identify business and market trends (University of San Diego, 2022).</p>
<p>AI tools and techniques are driving new opportunities across many diverse domains. AI and other algorithms are used extensively in online search, entertainment, social media, self-driving cars, visual recognition, translation tools, intelligent assistants/speakers, voice-to-text, and many other applications (ITU, 2021).</p>	<p>Data Analytics. Finding meaningful patterns in data by looking at the past to help make predictions (University of San Diego, 2022). Big Data Engineer/Architect. Develop systems that allow businesses to communicate and collate data (University of San Diego, 2022).</p>

Table 2. Opportunities of AI.

Positive Impact of AI.

In our society, all AI has an impact, negative or positive. AI can positively impact our worldwide community and in The United States, it can have a negative effect. It is essential to understand both sides of this argument about the use of AI both now and in the future as it continues to develop. For each negative correlation and AI, we have excellent quality factors already improving the quality of business for companies, and the quality of life for humans, worldwide and in the United States (Newman,2020).

Now, let us focus on the positive aspects of AI and how it affects our society.

Virtual Reality Learning (VRL):

With the arrival of technology, learners feel more associated and involved with their educational experience. Artificial intelligence in education has modernized this by recommending virtual reality lessons that permit users to learn while feeling engaged in a diverse environment or scene. Such as having entry to top universities throughout the world short of ever leaving their seats. In the future, virtual reality will let learners make a deeper absorption connection with their learning material. For example, in biology class, they can execute surgery on an animal's body without any risk of harming a genuine one and eliminate a part of the machines to comprehend better how they perform all within the consolation of their own homes or classrooms (AI in Education Technology, 2022). VRL helps improve knowledge by permitting learners to collaborate with their lessons and understand them in numerous ways. Rather than simply reading about a subject, learners can see the things they find themselves learning and assist learners in comprehending complicated issues.

Better for students with special needs:

It is possible to use artificial intelligence to help special needs students due to its ability to adapt. In addition to providing an individual approach to each student, the AI also ensures that each learns at their best pace while also allowing them one on one time with educators, who might otherwise overlook essential points of information when presenting in a large group setting due to the inattention or lack of participation from certain members of the class (AI in Education Technology, 2022).

Reduction in human errors:

Artificial intelligence aims to make decisions based on collected information and algorithms. Consequently, there are fewer errors and increased accuracy with greater precision.

An example would be, using artificial intelligence in weather forecasting, with most human errors reduced (Kumar,2019). As technology has improved, many tasks that once had to be performed by humans have been automated. Another example is that artificial intelligence (AI) has reduced human error when grading exams and homework (AI in Education Technology,2022).

Making life safer:

On nearly any level, AI Can make living better for people. This is mainly spot-on in the place of unsafe jobs--such as military work, engineering and construction work, and policing. As robots are competent to hold a first-responder role in executing the jobs that human beings have had to risk their lives for thousands of years, we can entirely be indebted for the lives it saves. Moreover, in frontline work, AI is assisting the community directly on jobs in a Safeway--for instance planning for flights, space travel, and even carrying out medical procedures.

External to the employment arena, AI is nearly producing it safer to live in our neighborhoods and communities. Intelligent cameras can be found across cities throughout the world, helping inform law enforcement of possible threats and helping to find the accused in certain cases (Newman, 2020).

Aging in place:

Research shows that most older citizens want to live in their own homes. AI can assist in reminding those hurting from dementia to consume their medications, eat their meals, and even find their TV remote; it is presenting new levels of freedom to those who may traditionally have to stay with families, colleagues, or in assisted living communities (Newman, 2020). Other positives of AI consist of being capable of remotely watching the health of our loved ones, arranging food and transportation, and even informing loved ones when the older person is walking and may be at risk of a fall. That type of liberty is irreplaceable for aging people (Newman,2020).

Artificial intelligence benefits the scientific community by improving how research is conducted and published. AI can help fight plagiarism, identify flawed statistics, reveal trends that are essential for research, identify new peer reviewers, and identify funding sources, which are benefits that are good for researchers and publishers in the scientific community. This is one of the benefits of fighting plagiarism: AI can waive the conventional algorithms for identifying plagiarism in support of software that can detect complete sentences or paragraphs that have been reworded (Enago Academy, 2021). The second benefit is Identifying Flawed reporting and statistics: AI can recognize whether a valuable element of research is missing and whether the data applied were inconsistent (Enago Academy, 2021).

Breaking down the nine ethical issues with implementing AI.

These are some of the negatives of how AI affects our society and the best or most important nine ethical issues in artificial intelligence. In Bossmann's (2016) article, what follows is a breakdown of the nine ethical issues in AI.

Unemployment:

The primary concern of the hierarchy of labor is automatization. Our ability to automate jobs has allowed people to take on more complex roles, moving the physical work that dominated the pre-industrial world to cognitive work that uses strategic and administrative tasks in our globalized society.

Millions of people work in the trucking industry in the United States alone. Imagine if there was a big company that developed self-driving trucks. If they become widely available in the next decade, they would lose many jobs. Nevertheless, self-driving trucks seem to be ethically sound if we consider the lower risk of accidents. Similarly, many office workers and most workers in developed nations may face the same situation.

This brings us to how people are going to spend their time. Many people still rely on selling their time to earn an income that will sustain them and their families. One can only hope that this option will allow people to be motivated and engage in non-work activities such as caring for their families, contributing to, and interacting with their communities, and finding new ways to be a part of or make a difference in society. How might they earn their income? Being a caregiver or cutting grass (lawn mowing), going into food service, working at Walmart, etc. This is for people who are not tech-savvy or may not have the ability to learn technology.

Inequality:

As a society, our economic structure is found in return for the contribution, typically in the form of an hourly salary. Most companies still operate on a per-hour basis for products and services. Artificial intelligence, however, allows a company to reduce its

dependence on human labor dramatically, and this response means fewer workers are needed. In other words, the people who own companies driven by AI will be the ones to make all the money.

Humanity:

A growing number of artificially general intelligent bots are modeling human communication and interactions. The first Turing Challenge was achieved in 2015 by a computer program named Eugene Goostman. Raters were asked to chat with an unknown entity using text input and guess whether they had been chatting with a human or a machine. Over half of the human raters were convinced they had been talking to a human being when they talked to Eugene Goostman.

People will frequently interact with machines as humans in the customer service department or sales. In contrast to humans, artificial bots can devote unlimited attention and kindness to another person. The reward centers in the human brain respond to machines, even though most of us are not aware of this. Just look at click-bait headlines and video games. Everyone often uses A/B testing to optimize headlines, a simple algorithmic optimization for content to attract our attention. Numerous video and mobile games use this and other methods to make them addictive. “Tech addiction is the new frontier of human dependency” Bossmann(2016).

We all can design software for different purposes since it has already proved effective at directing human attention and triggering specific actions. If used correctly, it could become a way to encourage society to become more beneficial. Yet it can also be detrimental if misused.

Artificial stupidity:

It is the process of learning that leads to intelligence, whether you are a human or a machine. Most systems undergo a training phase, which is when they "learn" how to recognize the correct patterns and react to their input. When a system has been professionally trained, it can be tested, in which more examples are provided, and its performance is reviewed.

A training phase cannot offer the full spectrum of examples that a system is likely to encounter in the real world. A system that operates in this way can be fooled in ways that humans cannot. Random dot patterns, for example, can fool a machine into seeing things that do not exist. If we want Artificial Intelligence to make the workplace safer, more efficient, and more productive, we need to ensure that the machine performs as planned and that people cannot control it to use it for their benefit.

Racist robots:

Even though artificial intelligence can process information faster and more complex than humans, it cannot always be relied upon to be accurate and impartial. Google and Alphabet are among the leaders in AI, as shown by Google's Photos service, which uses AI to recognize people, objects, and scenes. It can go wrong in some cases, such as when a camera fails to capture racial sensitivity or when software used to predict criminals shows bias against Black people.

It is important to remember that humans design artificial intelligence; sometimes, they may be biased and judgmental. In other words, AI, if used correctly or if used by those who strive for social progress, can create a positive change.

Security:

The more powerful technology becomes; the more reasons why technology can be used for evil purposes as well as good. This is true for robots being developed to replace human soldiers or robotic weapons and AI systems that could harm if used for malicious purposes. This issue means that cybersecurity will become even more vital because the fight will not be fought solely on the battlefield. We are dealing with a system that is faster, more powerful, and more capable than us by order of magnitude.

Evil genies:

As things become more automated, unintended effects may occur, which may be challenging to plan. It is not only adversaries that we need to watch out for. Is there a risk that artificial intelligence itself will turn against us? It does not mean that anything can become "evil" as humans might, or that AI can create a disaster, like what Hollywood films portray. A more realistic picture of an advanced AI system is the equivalent of a "genie in a bottle" that can grant wishes but with highly damaging consequences.

There is likely no malice involved in the case of a machine, only a lack of understanding of the whole context in which the wish has been made. Imagine a system that eliminates cancer worldwide. It generates a formula that, with a lot of calculations, will bring about an end to cancer by killing everyone on the planet. In theory, the computer could have achieved its goal of "no more cancer" very effectively, but not how humans intended.

Singularity:

It may not be easy to control an AI system that has a mind of its own, so control would need discussing for safety. Whether humans are at the top of the food chain is not

due to their sharp teeth or strong muscles. The dominance of humans is due to our creativity and intelligence. Consequently, people can control bigger, faster, more robust animals through physical means such as cages and weapons and mental means such as training and conditioning. Does artificial intelligence pose a serious question: will it, one day, be able to compete with humans? A sophisticated machine may anticipate this move and defend itself by shutting off the power; thus, people cannot rely only on "pulling the plug" either. Some call it "singularity" when human beings cease to be the most intelligent organism. Singularity is the outcome of the development of AGI and ASI.

Robot rights:

If AI exists and has complex feelings, what person will decide how these machines need to be treated? Neuroscientists are still trying to uncover the secrets of conscious experience; they have made significant progress in understanding the principles of reward and aversion mechanisms. These mechanisms are common to all animals and shared by even simple ones. A similar tool of reward and aversion exists in artificial intelligence systems. Reinforcement learning, for example, is like training a dog: improvements are reinforced with a virtual reward.

Overview of its impact on society

Artificial intelligence has impacted American society by significantly enhancing the productivity of our workplaces. AI impacts our daily lives and allows computers to perform such intelligent responsibilities as decision-making, problem-solving observation, and understanding of human communication. Our present-day lives have been affected by artificial intelligence, for instance, transportation, manufacturing, health care, education, media, and customer services.

Think about how far AI has come. The first revolution is called the steam revolution from 1760 - 1840, the second revolution is called the electricity revolution from 1870 - 1919, the third revolution is called the computer revolution from 1969 - the 20th century, and now we are at the industry 4.0 which is called the industrial revolution.

Artificial intelligence is a crucial principle of computer learning; AI has a profound significance to our future (Thomas, 2021) and impact. AI enables computers to harness vast amounts of data and use their learned intelligence to make the best possible decisions and discover things in fractions of the time that it would take humans (Thomas, 2021).

In terms of business executives' views on the future of AI, they recognize that to achieve their growth objectives, they need to use AI. They acknowledge and find it difficult to scale AI across their businesses. Artificial intelligence has impacted our lives and businesses here in the United States whether it's negative or positive. There have been three types of revolutions, each one increasing with different technologies and now there is a fourth technology that will increase our future. Through this process, there are also many different subsets of artificial intelligence that help people to be able to advance in knowledge and creativity. However, AI has increased high-level jobs for people who are tech-savvy or can learn the technology. For the people who believe they can't learn technology, there are still some jobs out there for them to be able to earn income, there might not be as many, but they will still have a chance, therefore we don't know what the future will hold for them. These jobs are just a few that were created in the United States by AI for 2022, Machine Learning Summer Intern-1, Machine Learning Junior Engineer, Artificial Intelligence Analyst, and Research Scientists- Artificial Intelligence, and there are more high-level jobs created. These are some of the jobs for people who are not so tech-savvy such as fast-food areas, lawn care, grass trimmer, caretakers, etc.

Research Finding and Discussions

During my investigation, it was discovered that American society, foreign societies, columnists, and authors all discuss bias or misinformation in some capacity in their writings, such as how algorithms may affect artificial intelligence. AI may have negative effects, including moral dilemmas and propaganda. The approaches that are still pre-programmed are fundamentally biased, and while intelligent algorithms are strong, they can also be used in unsavory or inadvertent ways. Since humans may create artificial intelligence, some bias or unfairness may be ingrained in the algorithms. Biased outcomes will be generated as soon as AI algorithms exist, are built on biased data, or are established with prejudice. However, given that emotion-based artificial intelligence (AI) might negatively impact weak and sensitive persons in ways that influence their capability to make smart choices and their independence in choosing. Clear or non-visible techniques may have little impact on people's choices or opinions.

Advertising has a lot of promise thanks to emotional intelligence in artificial intelligence, which has the potential to subconsciously affect consumer decisions without the customer being aware of it. Given that it offers more sophisticated methods and tactics for large organizations to conduct business online, digital technology will have a stronger impact on consumer rights (ITU, Marr, Newman, Szczepanski, Pusztahelyi, Sunil, Johnson, Vadapalli, Erin; Ariana). Yes, bias in artificial intelligence is a concern. It can have an impact on our lives and will always have an impact on our society as well as other societies. Getting high-quality data is crucial for creating successful AI systems, which will have an impact on the future. The data enter determines the outcome. People are prejudiced; therefore, the data may be slanted, and they may give inaccurate or partial information. As a result, inaccurate or biased information will always be a concern. Bias has always existed in our culture and will continue to do so into the future.

A lot of progress has been made in helping adults, kids, and young people thanks to artificial intelligence. There are other additional fields where AI has flourished, including fisheries, industries, health care, and education. For instance, improvements in healthcare technology have advanced both adult and pediatric cancer research. However, the development of various technology has greatly expanded the medical profession. How has technology changed for young adults, adults, and children? Due to easier access to a wider variety of information, the internet and technology have benefited education. When you can video call family and friends, communication is made simpler. Although it keeps us connected to one another, it also employs voice recognition to let you tap, swipe, type, dictate, and do other things on your device. Adults and younger adults use technology in the automotive and home appliance, industries, among other things. These are but a few illustrations: Our houses, offices, and smartphones all use artificial intelligence.

The best way to calm concerns about artificial intelligence (AI), which is our future, is to embrace it. The reason for mentioning this is because after talking to some individuals about technology and some of them are terrified of it, believe they don't understand it, or feel they are not tech-savvy. However, people are tech-savvy, though some may not be aware of it. If you can operate a smartphone, you have some knowledge of technology. You can learn a lot about technology or artificial intelligence if you can operate some of these gadgets in your house, car, smartphone, etc. As a result, the introduction of artificial intelligence will change employment opportunities in the United States, however, the effects may vary among industries and areas. AI is becoming more and more important to our culture, economy, and daily lives. Is artificial intelligence on the verge of becoming unstoppable?

Each person has a different conception of artificial intelligence, and to comprehend it, you must grasp that it involves a variety of technologies and terminology. However, there are numerous

perspectives on how AI is defined. In recent years, artificial intelligence has grown tremendously. In many other fields and businesses, it has made great progress. Globally and in the United States, there has been a remarkable improvement. Having said that, quantum computing advances the development of artificial intelligence and will have an impact on every industry, from national security to healthcare. The intelligence revolution will redefine how we live and work in the future, transforming businesses in every industry. Although AI has numerous difficulties, it also has many advantages. All of them, whether they are bad or good, influence our culture. Understanding all sides of the argument over AI's use now and in the future is vital as the field continues to develop. Both the United States and the global community stand to gain from artificial intelligence as well as lose out if it is used negatively. The nine most important ethical issues that artificial intelligence brings are among the numerous negative repercussions' s technology has on our civilization. Nine additional new technology trends are anticipated to appear in 2022. However, the effects of artificial intelligence will vary between businesses and sectors, changing career possibilities in the United States. All sectors and people are impacted by AI.

Another method artificial intelligence has an impact on society is through computer science and information technology, which uses software (which uses hardware). Because computer science entails coding and programming, it is necessary to program or code many of the gadgets that people use, including robots, face recognition technology, and many more types. Now you need hardware like telephone and radio equipment, video conferencing equipment, personal computers, etc. for information technology. All these affect society in some way because without them technology would not have advanced as much as it has. Through computer science and information technology, artificial intelligence has enhanced many aspects of American society, including health care, transportation, education, food services, and many more.

To give you an idea about artificial intelligence in American culture regarding AI, there is a lot to learn, and it can be difficult to understand. Each person's definition of artificial intelligence is distinct and it encompasses a range of terminology and technologies used to characterize intelligence systems. How we use it every day, as well as how it affects business, education, and the ability to move and manipulate objects, make decisions, solve puzzles, communicate in natural language, and use computers, smartphones, science, and technology to advance various fields such as medicine, the home, the car, fishing or sports, business, newspapers, and magazines, among others.

A subfield of computer science known as artificial intelligence (AI) aims to create systems and machines that can think and behave like people. despite what some people may believe, not all AI is machine learning. It may be as straightforward as if-then clauses or as difficult as a statistical model. Deep learning, machine learning, and artificial intelligence have all been impacted by these concepts in American society. Symbolic artificial intelligence was the dominant concept in the AI field from the post-war era until the late 1980s. The study of machine learning algorithms can be a jumble of if-then clauses or complicated mathematical formulas.

Big data, bias, and the Internet of Things are three additional significant factors that have had an impact on contemporary American society. Humans can introduce bias into AI systems, which can make them misleading or unreliable. Large data sets date back to the 1960s and 1970s, when the world of data started with the development of relational databases and when data centers were just getting started. Big data is known as the three Vs and is relatively new. This is true throughout the 1970s,

Soon, practically all manual interactions across all industries will alter due to artificial intelligence, shifting workers into areas where humans still have a significant influence on final

decisions (Joshi,2022). We should keep up with the most recent technological advancements and developing trends; to do this, we must look to the future and understand what skills will be necessary to land secure work in the future (Duggal, 2022).

CHAPTER 3

Methodology

The topic of this paper is to show the effect and influence that artificial intelligence has on American Society. In addition, AI should be simplified to make it easier for people who are not tech-savvy or may not have the ability to learn technology and are not experts in the field to comprehend it or relate to it. Therefore, the purpose of this qualitative, analytical, and secondary data case study was to explore, describe and examine the impact on American Society. This research was performed using a qualitative research methodology. the development of questions for the study, and to see some of the views on the impact of artificial intelligence. After using various search engines such as ScienceDirect, ProQuest, EBSCO, University Library Catalog, New Database A-Z, Google, and Google Scholar, articles, books, and journals that help me to collaborate and to come up with my conclusion on some of the problem statements in my paper.

These are a few questions:

Where will this leave the people who are not tech-savvy or may not have the ability to learn technology?

However, AI technology can be good or bad, or misleading.

Artificial intelligence's impact on our society can be negative or positive.

How, do artificial narrow intelligence (ANI), artificial general intelligence (AGI), and artificial superintelligence (ASI) impact American Society?

How artificial intelligence improves and has a real-world impact on people, institutions, and culture.

How has progress been made in some of AI's standard sub-areas?

How bias also deals with the current state of AI and the impact bias has on American Society.

How did I determine which paper I needed to focus on?

I focused on the impact artificial intelligence had On American Society, but my focus was artificial intelligence. My first focus was on artificial intelligence in business but then I changed too to American Society. The article I focused on the most was “AI and the Future of Work in the United States” and a book called “The Intelligence Revolution Transforming Your Business with AI” and some other articles and books. Therefore, I focus on what, why, when, where, and how of artificial intelligence in American Society.

How many results came up? There were a lot of results that came up on artificial intelligence, however there were some main ones that came up all the time which were the medical field, health care, and education. There was not a lot of them about American Society on artificial intelligence.

CHAPTER 4

Results

Based on my research and literature this is the current trends in AI regarding a survey of the American mindset and trends. In this primary research, the survey will show the percentage of people who think about artificial intelligence or technology in American Society and how artificial intelligence, or technology would be good or bad based on the percentage. This will also exhibit what people think and gave the percentage of technology in American society and the impact it has and gives the demographic characteristics of who supports the development of artificial intelligence in America.

In accordance with Baobao Zhang & Allan Dafoe, it is important to understand how the public views AI and the authority of AI to craft informed policy and identify opportunities to educate the public about AI's character, benefits, and risks. A wide range of aspects of society could be affected by advances in artificial intelligence (AI): the labor market, transportation, healthcare, education, and national security. However, artificial intelligence does come with risks, disruptions, and potential benefits. This report will present the results from an extensive look at the American public's attitudes toward AI and AI power. As the study of public opinion toward AI is relatively new, these results provide preliminary insights into the character of U.S. public opinion regarding AI. To gain a deeper understanding of public opinion toward AI, more work needs to be done. This report is based on findings from a nationally representative survey conducted by the Center for the Governance of AI, housed at the Future of Humanity Institute, University of Oxford, using the survey firm YouGov. The survey was conducted between June 6 and 14, 2018, with a total of 2,000 American adults (18+) completing the survey. The analysis of

this survey was pre-registered on the Open Science Framework. Below are some highlight results from the survey (Table 3):

<p>More Americans support than oppose developing AI: A substantial minority (41%) somewhat or strongly supports the development of AI. A smaller minority (22%) somewhat or strongly oppose its development. Other survey results. In a recent survey, 51% of Americans indicated that they support continuing AI research while 31% opposed it (Morning Consult 2017). Furthermore, 77% of Americans expressed that AI would have a “very positive” or “mostly positive” impact on how people work and live in the next 10 years, while 23% thought that AI’s impact would be “very negative” or “mostly negative” (Northeastern University and Gallup 2018).</p>
<p>Demographic characteristics account for substantial variation in support for developing AI. Substantially more support for developing AI is expressed by college graduates (57%) than those with high school or less education (29%); by those with larger reported household incomes, such as those earning over \$100,000 annually (59%), than those earning less than \$30,000 (33%); by those with computer science or programming experience (58%) than those without (31%); by men (47%) than women (35%). These differences are not easily explained away by other characteristics (they are robust to our multiple regression).</p>
<p>The overwhelming majority of Americans (82%) believe that robots and/or AI should be carefully managed. This figure is comparable to survey results from EU respondents.</p>
<p>Americans consider all of the thirteen AI governance challenges presented in the survey to be important for governments and technology companies to manage carefully. The governance challenges perceived to be the most likely to impact people around the world within the next decade and rated the highest in issue importance were:</p> <ol style="list-style-type: none"> 1. Preventing AI-assisted surveillance from violating privacy and civil liberties 2. Preventing AI from being used to spread fake and harmful content online 3. Preventing AI cyber-attacks against governments, companies, organizations, and individuals 4. Protecting data privacy
<p>We also asked the above question but focused on the likelihood of the governance challenge impacting solely Americans (rather than people around the world). Americans perceive that all of the governance challenges presented, except for protecting data privacy and ensuring that autonomous vehicles are safe, are slightly more likely to impact people around the world than to impact Americans within the next 10 years.</p>
<p>Americans have discernibly different levels of trust in various organizations to develop and manage AI for the best interests of the public. Broadly, the public puts the most trust in university researchers (50% reporting “a fair amount of confidence” or “a great deal of confidence”) and the U.S. military (49%); followed by scientific organizations, the Partnership on AI, technology companies (excluding Facebook), and intelligence organizations; followed by U.S. federal or state governments, and the UN; followed by Facebook.</p>
<p>Americans express mixed support (1) for the U.S. investing more in AI military capabilities and (2) for cooperating with China to avoid the dangers of an AI arms race. Providing respondents with information about the risks of a U.S.-China AI arms race slightly decreases support for the U.S. investing more in AI military capabilities. Providing a pro-nationalist message or a message about AI’s threat to humanity failed to affect Americans’ policy preferences.</p>
<p>The median respondent predicts that there is a 54% chance that high-level machine intelligence will be developed by 2028. We define high-level machine intelligence as when machines can perform almost all tasks that are economically relevant today better than the median human (today) at each task. See Appendix B for a detailed definition.</p>
<p>Americans express weak support for developing high-level machine intelligence: 31% of Americans support it while 27% oppose its development.</p>
<p>Demographic characteristics account for substantial variation in support for developing high-level machine intelligence. There is substantially more support for developing high-level machine intelligence by those with larger reported household incomes, such as those earning over \$100,000 annually (47%) than those earning less than \$30,000 (24%); by those with computer science or programming experience (45%) than those without (23%); by men (39%) than women (25%). These differences are not easily explained away by other characteristics (they are robust to our multiple regression).</p>
<p>There are more Americans who think that high-level machine intelligence will be harmful than those who think it will be beneficial to humanity. While 22% think that the technology will be “on balance bad,” 12% think that it would be “extremely bad,” leading to possible human extinction. Still, 21% think it will be “on balance good,” and 5% think it will be “extremely good.”</p>

Table 3. Survey of the American mindset and trends

CHAPTER 5

Future research

As a result of examining and analyzing the current research process through the qualitative method and secondary data, there is still further research that could be done in addition to gaining a deeper understanding of public opinion toward AI and talking about common social awareness and beliefs. Such as,

The younger generation is more open to AI as they've grown up with computers.

How will they foster it?

Is the ease of use provided by AI finally starting to foster acceptance by the older generation?

The social insight and beliefs of the younger generation in AI growing up with computers.

How artificial intelligence changes the future for the younger generation and the older generation.

What are the insight and beliefs of the younger generation and older generation in artificial intelligence?

How will the younger generation leverage artificial intelligence?

How do the younger generation and older generation see artificial intelligence?

Where do we stand with the youth in artificial intelligence?

Where do we stand with the older generation in artificial intelligence?

To abide by each of the 9 ethical concerns and give a framework on how to transfer their concerns to an appropriate level.

Where will this leave the people who are not text-savvy?

Also, for future research, the quantitative method, and statistics can be used on some of these questions.

Conclusion

Executing this research was challenging on a mental and emotional level. The issue raised in this research project personally affected me and is still a concern in our American Society. However, the definition of artificial intelligence varies from person to person. "Artificial intelligence" refers to the "thinking capability created by humans". It can be complicated to understand for a layperson and there is a lot of information to learn about artificial intelligence. AI is a broad term that covers different technologies and terminology.

The fourth industrial revolution is currently underway. Every firm in every field as well as our daily lives will change as a result. AI, big data, bias, and other related technologies are at the forefront of the intelligent revolution. This will serve as a part of our future for AI, The Intelligence Revolution.

Artificial intelligence will transform the opportunity for jobs in American Society. Office support and food service jobs are the most at risk of automation. Rural districts still lack the foundation to implement speedy Internet, making it difficult to attract high-level positions. A workforce crisis is threatening economic competitiveness and national security.

Machine learning algorithms enable machines to become "intelligent," enabling them to make decisions depending on the data they are fed, big data technology is what makes this possible. Companies use AI in silos (storage towers) to create machines that can use huge data and reason independently.

When might we classify the use of genetic algorithms as mass murder? A system suffers when it receives unfavorable input from its reward functions. It is not a big stretch to think of

machines as having the capacity for perception, emotion, and action. Robots are developing into more advanced, lifelike machines.

Whether or not to approach these machines like intelligent animals is up for debate. Can we consider the pain "feeling" machines go through? Some ethical dilemmas emphasize minimizing suffering, others focus on outcomes that are risk-averse. Despite the hazards, technological advancement improves everyone's quality of life.

Artificial intelligence has both its transformative potential and its drawbacks, such as concerns about job displacement and escalating inequities. All AI affects our society, whether it is detrimental or beneficial. Understanding all sides of the debate on AI both today and in the future is crucial as this technology develops. Artificial intelligence (AI) has had an impact on our lives and enterprises in American Society.

This study aims to show the effect and influence that artificial intelligence (AI) has on American Society. AI needs to be clarified so that non-technologists who are not professionals can understand it. There is still more study that could be done as a result of looking at and assessing the current research process. Artificial intelligence has so much potential, it is our responsibility to use it ethically.

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