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Unleashing Uncharted Horizons: The Parallel Evolution of AI and Historic Technological Shifts

Dutta Niham
Monash University Malaysia

E-mail address: duttahmn@gmail.com

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Abstract

The transformative impact of technological innovation in warfare through historical examples of Tanks and Airplanes emerging from World War I. It highlights the swift evolution from invention to weaponization, emphasizing the potential for unexpected consequences. Drawing parallels with the nascent AI technology, the abstract discusses its uncertain role in shaping the future, including its current applications in warfare and governance. It underscores the growing influence of AI across sectors, especially in the military domain with instances like Ukraine. Amid a global shift towards AI adoption, led by major nations, the abstract underscores the emergence of a potentially perilous AI technology race, raising concerns about its capabilities and vulnerabilities, including scenarios of rogue actions with catastrophic implications.
Keywords: AI technology, technological innovation, and warfare and governance.

1. Introduction

Humans, for millennia, have wanted and strided for things that make life easier for them. The wheel was invented in the 4th millennium BCE in Iraq; we have advanced our capabilities and achievements. Humans are amazing creatures who can adapt to many things, from the environment to modern times. We are now in a significant era of great advancements, like another industrial revolution is beginning to emerge [1]. We have all seen through history that advancements take time with trial and error, from weapons to new ways to manufacture goods time and effort were of the essence during the ancient period when the pulley and crane systems were formed and perfected to the best they could be during that time. The Greeks used to call it "Machina," which we have coined our term machine quite simplistic how we have converted so many ancient words to have modern meanings throughout time. The Greek civilization has pioneered much for the modern day, just as the Romans did [2].

While it is unknown who invented the pulley system, it has helped people lift unfathomable things themselves. Archimedes proved this when he lifted a ship ashore by

himself using the block-and-tackle system, shocking both kings and commoners alike who had never witnessed such a feat in the past [3].

Plutarch recorded this feat, which has stood the test of time while others have withered away to be long forgotten. This technique was used against enemy ships to slam them into the ground or water, severely damaging them [4]. This was just the start; as time went on, we advanced more and more with technology, from the pulley system and swords to the invention of gunpowder in China that quickly spread across the world and forever changed the face of warfare in a way we have never seen before never to be sent back to the age of swords and spears even though they will be used even into modern times [5].

Guns, Cannons, and other forms of explosive weapons soon appeared. War breeds advancement; that is when we see the most technological advancement in weaponry and technology. Before the First World War, we would line up and fire at one another and hope to hit someone, as the muskets could not hit the broadside of a barn [6]. The First World War changed that with the invention of Tanks and Airplanes. It took us thousands of years to learn to fly and only eight years to weaponize them and start using them to kill each other with them. The British used the tank for the first time on September 15th, 1916, at the Battle of the Somme against the German Empire. AI technology is new, just like the above technologies were at the time. It's an unknown variable on how technology will help us in the long run. It's already being used in war worldwide and by governments to keep people in line with their ideals [7].

2. Research Method

AI is also being used to optimize traffic management systems, reducing congestion and improving the overall traffic flow. The integration of AI in transportation has the potential to revolutionize how we commute, reducing accidents, saving time, and improving our overall transportation experience. AI technology is also playing a significant role in the field of e-commerce and customer service. Companies employ AI-powered chatbots and virtual assistants to provide personalized and efficient customer support [8]. These AI systems can understand natural language, answer queries, and assist customers in making informed decisions. Using AI technology, e-commerce platforms can provide tailored product recommendations based on individual preferences and browsing history, enhancing the overall customer experience. Moreover, AI algorithms can analyze vast amounts of data to identify market trends, optimize pricing strategies, and improve inventory management, leading to increased sales and customer satisfaction [9].

2.1 Literature Review

AI systems learn from vast amounts of data, and if the training data contains biases or reflects societal prejudices, AI can perpetuate and amplify them. This can lead to discriminatory outcomes in areas like hiring, criminal justice, or loan approvals, reinforcing existing biases and social inequalities. This would prove detrimental to any progress made, which has been little at all, given everything [10].

On the other hand, it will help us with tasks of great importance, like the science sector and teaching [11]. Our youth are our future; we need to do everything we can to give them the best education and bring along new technology to assist us in the process. Smartboards were new technology not long ago, and we have only seen the start of more unique things. Artificial intelligence has become integral to our lives, revolutionizing various sectors and driving innovation across industries [12].

One significant area where AI has made a tremendous impact is healthcare. AI-powered systems and algorithms have the potential to analyze vast amounts of medical data, diagnose diseases more accurately, and suggest personalized treatment plans. From medical imaging and diagnostics to drug discovery and patient monitoring, AI technology is transforming healthcare by enhancing efficiency, improving patient outcomes, and saving lives.

This will significantly affect teaching with the ability. Another sector where AI technology has seen rapid advancements is transportation [13]. Autonomous vehicles powered by AI algorithms are paving the way for the future of transportation. These vehicles can sense their surroundings, make decisions, and navigate without human intervention. Transportation can become safer, more efficient, and environmentally friendly with AI technology [14].

3. Findings

Human-AI collaboration, where AI assists humans in decision-making and problem-solving, is gaining attention. This approach combines the strengths of both humans and machines.

3.1 Problem

AI is also being used to optimize traffic management systems, reducing congestion and improving the overall traffic flow. The integration of AI in transportation has the potential to revolutionize how we commute, reducing accidents, saving time, and improving our overall transportation experience [15]. AI technology is also playing a significant role in the field of e-commerce and customer service. Companies employ AI-powered chatbots and virtual assistants to provide personalized and efficient customer support. These AI systems can understand natural language, answer queries, and assist customers in making informed decisions. Using AI technology, e-commerce platforms can provide tailored product recommendations based on individual preferences and browsing history, enhancing the overall customer experience [16]. Moreover, AI algorithms can analyze vast amounts of data to identify market trends, optimize pricing strategies, and improve inventory management, leading to increased sales and customer satisfaction [17].

The teaching experience from just the smart boards coming out was super beneficial for the teaching program. It helped by showing the students everything better than the old projector models. Having this was a massive boost in grade turnout percentage; students were learning much better, and it seriously helped those with learning disabilities [18]. The Use of Artificial intelligence can guide educational content and learning experiences to individual student's needs and preferences. By analyzing student learning patterns data, AI systems can adapt instructional materials, pace, and difficulty levels, providing personalized recommendations and interventions to optimize learning outcomes. This would help immensely with people with learning difficulties a lot better than before [19].

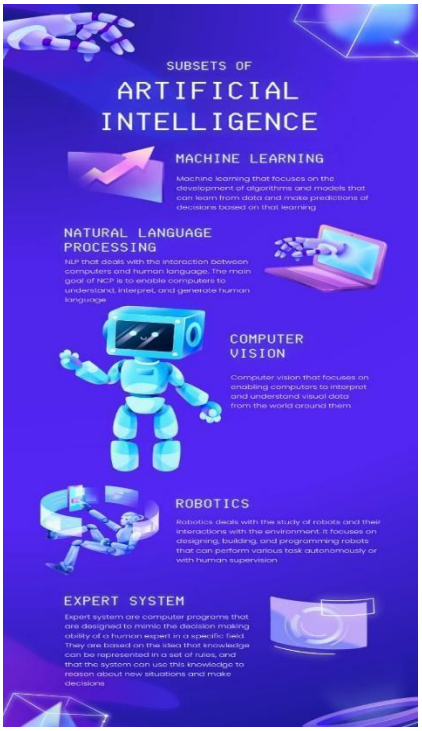
Instructional support AI teaching tools can provide real-time feedback and support to students and teachers. Intelligent tutoring systems can identify areas where students struggle, offer guidance, and practice exercises. Similarly, teachers can benefit from AI-powered tools that automate administrative tasks, allowing them to focus on instruction and student support. Overall, this will improve the classroom students' ability to learn at their own pace.

Another factor is the access to quality education. Many people do not have that, and it affects them severely; education is the guarantee of a good life. It is a never-ending cycle of poor education and poverty [20]. The better the education, the better the person will be in life, and it has been proven repeatedly that the well-educated are much better off than the not. Less likely to be poor and or homeless, but there is no guarantee of anything life has to offer [21]. You have to fight for it, and education is there to support you.

3.2 Research Implementation

This new tech has the potential to bridge educational gaps by providing access to quality education in underserved areas. With AI-powered virtual classrooms and online learning platforms, students from remote locations or disadvantaged backgrounds can

access educational resources and interact with virtual tutors or teachers, thus expanding their learning opportunities. The downsides are unknown; nothing will ever replace teachers. They will always be needed. On the other hand, other jobs come and go, which people are scared of becoming obsolete, but that's how time works, and technology rises to replace old manual labor jobs.



Picture 1. Artificial Intelligence

AI can support teachers' professional growth by providing access to personalized learning resources, professional development courses, and adaptive training programs. By analyzing educators' performance and learning needs, AI can recommend relevant resources, offer feedback on teaching practices, and promote continuous improvement. Where humans stick to known patterns and old ways, machines allow us to branch out and discover new ways of learning and teaching. Plus, the students get to learn more about the technology more and more, giving them ideas on potential job aspirations and careers they want in robotics or the science and engineering fields; we need lots of them. We are in crisis, and AI may be the way to help us out of that hole, but we cannot rely too much on it, which will backfire and make us stupid once more. Our brains are already shrinking, and we see what's happening.

Students aren't learning how they used to anymore. Times have changed, and things are showing that the lack of education and the fast-tracking of it during the pandemic did nobody any good The consequences will be felt in due time, and it will flog us. We can't do anything about that, though; only improve and move on to better the planet as a whole. More competent people mean better decisions and steer us toward a better future even though we are still learning. Dependence on AI in teaching may lead to a diminishing role of human educators. It is essential to strike a balance between technology and human interaction to ensure effective learning. We will have to watch closely as this tech emerges as more and more complex entities to deal with and configure.

Humans are undeniably imperfect beings. We make mistakes all the time, from love

to our career or the people we associate with; it all affects the outcome of what we want to accomplish in life. Machines are designed to be perfect even though we don't fully comprehend how it function; like the supercomputer, they can do tons and tons of calculations in seconds while we take minutes to hours trying to solve some of the universe's most difficult questions. This tech can vastly improve our capabilities with everything; it will be amazing what new things will come out of this. While it is very dangerous tech, we must limit its capabilities; we can't let it get too smart, or it will deem us invaluable humans.

4. Conclusion

Our lives are measured by years and decades; machines have no concept of time, life, or death; we could be mere bugs in their way if it came down to that. They don't feel pain, and they don't feel emotion right now. They are mere tools for our advancement; we gain a lot from using them, but what do they gain in return? Essentially nothing but doing the same tenuous labor that no sane individual would do; any person or thing would get tired of it.

We have seen other robots shut down after a while of doing the same tasks repeatedly; if we don't like it, they won't like it. An angry AI that feels no pain isn't beneficial to us by any means. We would have to reprogram them or destroy them and hope they haven't gained enough intelligence to link processors and become even more intelligent when in groups like hive minds but with individual traits, the more, the wiser they are. It is terrifying. Thus we should never allow any form of AI off the shackles if we know what is good for us it may be the end of us as we know it if we aren't careful.

The Dawn of AI is emerging and who knows if we are ready for the great things that will emerge from that idea or if we are ready for the consequences of adding a new tech into the global market every aspect of our lives will be affected by this automated intelligence. People today are super paranoid will adding another factor help or hurt us only time will tell on the amazing things that will come from this machinery.

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