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AI and Warfare: Is the Battlespace Ready?

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Introduction:

Artificial Intelligence (AI) has dramatically transformed modern warfare, reshaping tactics, strategies, and the nature of conflict itself. Its integration into military operations spans various facets, from autonomous weapons systems to intelligence gathering and logistical support. AI enables rapid decision-making, enhancing the speed and accuracy of responses while minimizing human error. Autonomous weapons equipped with AI can independently identify and engage targets, raising ethical concerns regarding their use in warfare. The prospect of machines making life-and-death decisions without human intervention sparks debates about accountability and the potential for unintended consequences. The example of what had happened and is happening in Gaza can be drawn here in order to examine how brutal role AI can play in modern warfare. As sophisticated militaries throughout the world increase their use of intricate and opaque automated systems in combat, worries about the risks these systems pose to civilians are becoming more and more pressing. This is reflected in the slowly developing image of how Israel's military is utilizing AI.

The Israel Defence Forces has long cultivated an image for itself as a technical wizard and has made audacious but unsubstantiated claims in the past about utilizing cutting-edge technologies. Following the 11-day conflict in Gaza in May 2021, officials declared that Israel had used AI and machine learning to wage its "first AI war." The IDF now has an unparalleled opportunity to use these tools in a much larger theater of operations, thanks to the most recent Israel-Hamas war. In

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particular, the platform called “Gospel” has allowed officials to significantly speed up a deadly production line of targets that they have likened to a “factory.”[2]

AI-driven predictive analytics and data processing aid in assessing risks, predicting enemy movements, and optimizing resource allocation. Furthermore, AI assists in cybersecurity, safeguarding sensitive military networks and systems from cyber threats and attacks. On the other hand, ethical considerations surrounding AI in warfare continue to evolve, demanding global dialogue and regulations to ensure responsible and humane use. Striking a balance between leveraging AI's capabilities for military advantage while adhering to ethical principles and international laws remains a pressing challenge. But for that to happen, a proper governance mechanism must be in place.

How AI Influences Geopolitics and World Order:

The most unstable geopolitical era since the end of the Cold War has been brought about by the US and China's growing rivalry, wars in Europe and the Middle East, and shifting global alliances. Simultaneously, the emergence of generative artificial intelligence is maybe the biggest innovation since the internet. "Traditional AI" has been ubiquitous in the previous two decades, driving social media targeting, content suggestions, and advertising algorithms. However, its influence and power were mostly hidden and integrated inside apps. These days, generative AI is in the spotlight, with user interfaces that are accustomed, skillful, and unmistakably machine-driven intelligence. Leaders in every capital and commercial hub had simultaneous access to this instrument, unlike earlier technological revolutions like the printing press and the internet, as ChatGPT became the fastest-adopted technology in history.

Although there remains uncertainty surrounding the technology's future, generative AI was almost unanimously recognized as a paradigm-shifting innovation rather than a passing fad or hype cycle. We have now entered a phase known as the "inter-AI years," when leaders across all industries are attempting to comprehend what generative AI will mean for them and how they may take advantage of opportunities while minimizing dangers. This phase is marked by widespread

[2] The Guardian, “‘The Gospel’: How Israel uses AI to select bombing targets in Gaza,” 1 Dec 2023, https://www.theguardian.com/world/2023/dec/01/the-gospel-how-israel-uses-ai-to-select-bombing-targets.

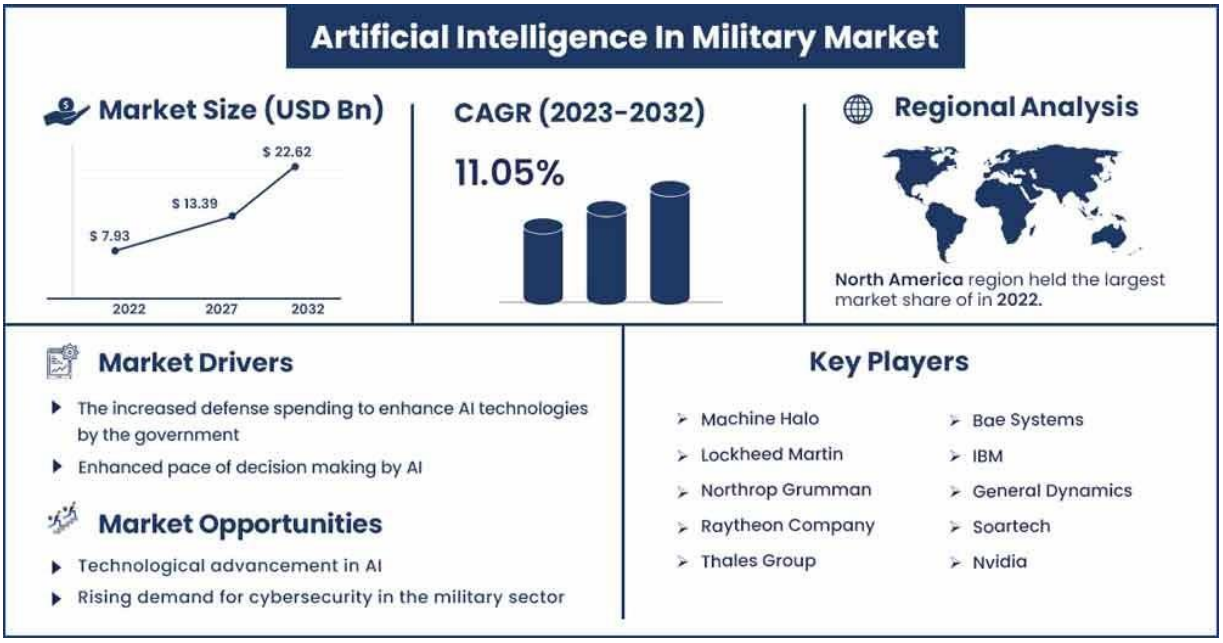
adoption and fast innovation.[3] World leaders are not oblivious to these emerging trends either and therefore, nations are also investing in modern technologies and trying to comprehend how AI can be used in the battlespace to attack their opponents and reduce the number of loss of troops.

Source: US Department of Defence

Since the 1950s, artificial intelligence (AI) has advanced in such a way that it has revolutionized both industry and daily life. Since artificial intelligence is not yet controlled, the armed forces of the world are integrating AI in a number of ways and are investigating and developing a wide range of AI-based autonomous systems. The Dynamic and Analysis Re-planning Tool (DART), created by DARPA (USA), is credited with being the first AI-based autonomous system to schedule the supply chain and relocate personnel in order to address the military's logistics efficiency issue. Since then, things have advanced to the point where disruptively large-scale deployments of AI-based autonomous systems have been seen in recent conflicts and wars. An autonomous drone positions itself to wait for an efficient precise strike at a target that the system has chosen, at a

[3] Jared Cohen and George Lee, "The generative world order: AI, geopolitics, and power", Goldman Sachs, 14 Dec 2023, https://www.goldmansachs.com/intelligence/pages/the-generative-world-order-ai-geopolitics-and-power.html.

height above any countermeasures. This could be one of the clearest examples of how autonomous systems are being integrated into the modern warfighting infrastructure, without sacrificing effectiveness. These systems maximize on high operating expenses while protecting soldiers from 3D (Dull, Dirty, and Dangerous) chores in addition to their high efficacy and efficiency.[4]

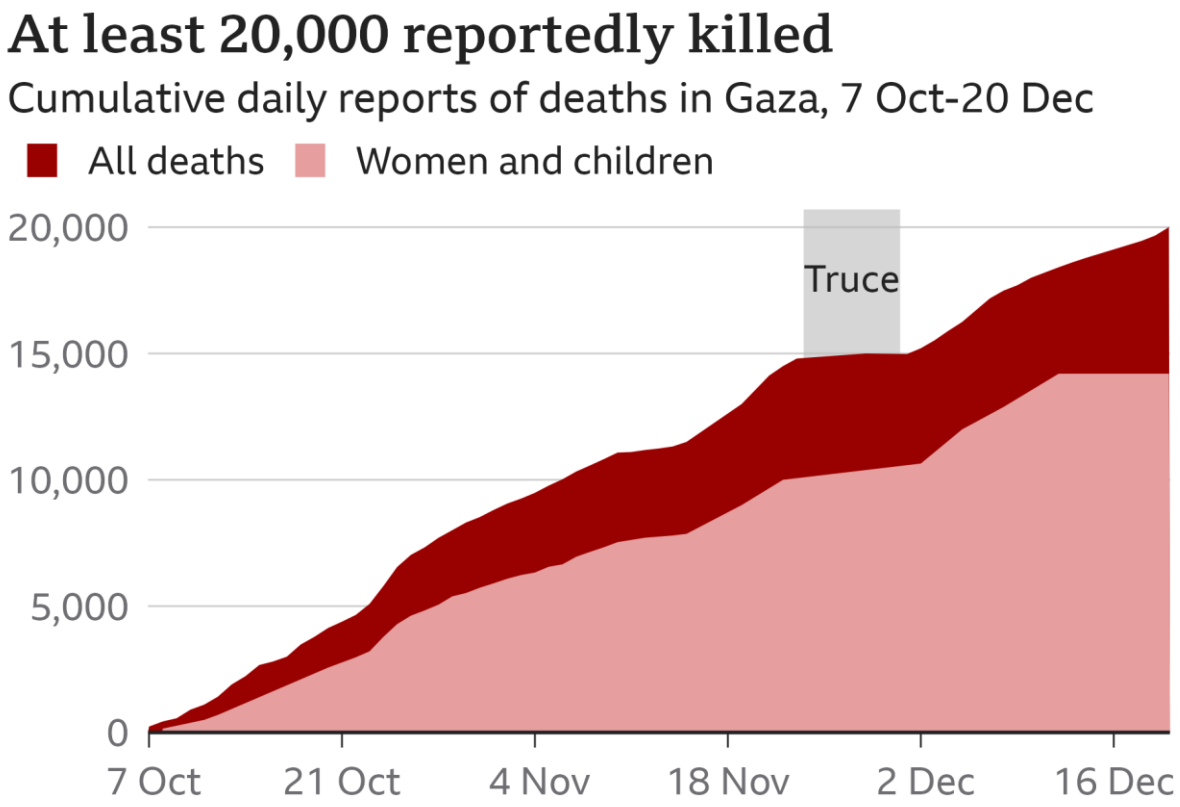


Source: LinkedIn

However, it must be kept in mind that militarization of AI can have severe implications on a nation's internal and external security. We know that AI relies on a vast storage of data and that is what helps AI to operate. This means that AI has access to all sorts of information and a breach of that storage system can put a nation's security at stake. It is also necessary to take into consideration that AI is not beyond the existing biases. Hence, it cannot be claimed that AI would be able to take the right decisions in the right time in terms of geopolitics and world order. For instance, the case of Gaza can be examined here. Israel is attacking Gaza with its very highly efficient AI systems and it is claiming that by using AI in warfare, Israel is able to target Hamas and destroy its bases and leave the civilians away. However, the reality has been far different from this. Due to collateral damage of Israel's so called targeted attacks in hospitals, schools, residential buildings and even refugee camps, more than 23,000 civilians have lost their lives and thousands

[4] Lt Colonel Narendra Tripathi, "AI based Autonomous Systems: Future in Military", LinkedIn, 4 Aug 2023, linkedin.com/pulse/autonomous-systems-future-military-lt-colonel-narendra-tripathi.

are buried under the rubbles. The use of AI generated weapons resulted in mass murders of innocent civilians and an asymmetric war as Gaza clearly does not have the means to retaliate equally. Hence, countries such as Iran and Yemen stepped up to help out Gaza, which destabilized the peace of the Middle East. Now, the peace and harmony of the entire Middle East is at stake as Israel and its allies are trying to throttle any support that is coming from the Middle East to Gaza. This is how, AI is altering geopolitics and world order right in front of our eyes.



Source: Hamas-run Gaza Health Ministry and Government Media Office

Need for AI Governance Mechanism in Place:

The increasing number of remotely piloted drones in conflict zones worldwide is a sign of AI-assisted warfare: between 2009 and 2017, the number of American soldiers engaged in combat dropped by 90%,[5] but the number of US drone attacks climbed tenfold.[6] Drones from the US,

[5] Sam Gollob and Michael E. O'Hanlon, "Tracking Variables of Reconstruction and Security in post-9/11 Afghanistan," Brookings, August 2020, https://www.brookings.edu/articles/afghanistan-index/.
[6] Jessica Purkiss and Jack Serle, "Obama's Covert Drone War in Numbers: Ten Times More Strikes Than Bush," The Bureau of Investigative Journalism, https://www.thebureauinvestigates.com/stories/2017-01-17/obamas-covert-drone-war-in-numbers-ten-times-more-strikes-than-bush.

Russia, China, Iran, Israel, Turkey, and the US are currently carrying out assaults in Southeast Asia, Europe, the Middle East, and Africa. During the secret war on terror, President Barack Obama ordered 10 times as many airstrikes as his predecessor, George W. Bush. Obama enthusiastically supported the US drone program, supervising more strikes in his first year of office than George W. Bush did in his whole term. During Obama's two terms, there were 563 strikes (mostly by drones) against Pakistan, Somalia, and Yemen, compared to 57 under Bush. Reports filed by the Bureau indicate that between 384 and 807 civilians were murdered in various countries. Obama's goal to continue fighting al Qaeda while removing the US military from unwinnable, expensive land battles in the Middle East and Asia was linked with the deployment of drones. However, the targeted killing initiative has received a lot of backlash.

Drone attacks are so "exceptionally surgical and precise," according to the Obama administration, that they remove terror suspects without endangering "innocent men, women, and children." Many human rights organizations, however, have refuted this allegation, and the Bureau's data on civilian casualties also show that this is frequently not the case. This has happened because of AI's lack of capacity to precisely differentiate between who or what to target and destroy. Moreover, as there is no existing law and order laid out against atrocities which are committed through AI, it encourages nations even more to use AI and bypass any sort of accountability. Had there been a structured set of rules and regulations, somewhat like the International Humanitarian Law (IHL), the number of drone strikes and the fatalities they have caused would have been much lesser.

Conclusion:

Fully autonomous drones that can locate and strike targets on their own are a definite possibility; in fact, a UN investigation suggests that such drones may have already been used. One type of lethal autonomous weapons system ("LAWS") is one of these systems. International initiatives are underway to severely restrict or outright outlaw them. However, the big military countries, in particular, are reluctant to outlaw them because they have the capacity to make or break a war. Autonomous weapons are considered the third revolution in warfare following the discovery of the atomic bomb and gunpowder. They are equally capable of shifting the distribution of power.

According to Paul Scharre, a former soldier and consultant for the US Department of Defence, giving up on the employment of cutting-edge AI technology in weaponry would be equivalent to

giving up electricity and internal combustion engines. However, if AI based weaponry is pursued, the opportunity cost will also be much greater. In other words, the number of casualties will be much higher and the level of destruction will be much more lethal.