

AI IN CONFLICT

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Artificial Intelligence (AI) is the tool of the future, and modern militaries have noticed, it has been used in modern warfare, and its presence can be seen in numerous wars. Israel, have pioneered this during their conflict in Gaza, notably with its state-of-the-art Lavender system, as well as 'the Gospel'. Another country using large amounts of AI is the USA, the Joint All-Domain Command and Control (JADC2) is a military network powered by AI. These two countries primarily use AI for four warfare purposes.

The first of these is Target Identification; AI algorithms can quickly analyse and process vast amounts of data to identify potential targets for strikes, and this is not even limited to satellite imagery, instead AI can analyse Intelligence reports and historical data in depth. This is far cheaper than current human efforts, while also being more effective. By processing this information, AI can then identify targets such as military installations, weapon storage facilities, and rocket launch sites with high degree of accuracy and speed.

Once this analysis has been done, the AI can then do mission planning. This is because by identifying potential enemy sites, it can calculate the most effective routes for drone strikes and other air operations in real time, adapting to factors such as: terrain, weather conditions, and the possibility of collateral damage. This has been proven in practise by Israel's AI database 'Lavender' which has been used to plan military missions with a high degree of precision and accuracy in Gaza.

AI systems are also capable of making split-second decisions based on real-time data. Updates in weather patterns or new information on the enemy are no problem for Lavender; it has even been proven capable of adjusting to changes mid-flight by responding to these changes. Being to do this has proved decisive, and can prove to be a key element in winning battles, and ultimately entire wars.

Finally, AI systems, such as Lavender, can optimise strike parameters such as the timing of strikes, to maximise damage towards the enemy while also being able to minimise civilian casualties. This is done by analysing enemy movement patterns and behaviours and using AIs predictive capabilities to have reasonable certainty of the future movements of enemy combatants and thus giving a side the ability to target them more effectively.

A prime example of these automated systems is JADC2. This AI system focuses on interconnectivity between sectors of the US military by connecting sensors, shooters, and command centres and linking them across all domains and share data and intelligence seamlessly. By aggregating and analysing vast amounts of data, JADC2 also enhances the military's ability to respond quickly and generate coordinated threats. Additionally, the Machine Learning abilities of AI allow this technology to quickly improve by learning enemy patterns, which allows future assaults to be far more effective.

Aside from military actions, AI can also be useful more defensively. This goes all the way back to World War 2, where the Bombe — an early automatic device developed and heavily used by the British — aided in decrypting messages. While not technically being an AI due to the fact it could not learn from itself, it laid the groundwork for modern AI, which expand on this ability by being able to predict when attacks or strikes are planned. This allows adequate preparation to be made.

Using AI does have benefits that make it an important tool that many militaries have begun exploiting; its ability to streamline military decisions, by improving operational efficiency, allowing for faster decision-making, and even a more efficient resource allocation by automating repetitive tasks and data analysis. But AI excels in its enhanced situational awareness by providing military commanders with real-time intelligence that has been analysed and that shows high priority targets and how best to approach a strike. This information is simply invaluable, having a full plan of action in seconds is what will win future wars, as it could make the difference between death and survival.

Despite its numerous benefits, AI is not free from ethical concerns. If autonomous AI can take control of life-and-death and decide without human intervention, this raises large ethical concerns. Especially given AI are only as good as the data they are trained on and likely contain inaccurate or biased data, in the worst scenarios this could lead to needless civilian death. The biggest risk regarding AI though is the escalation of conflicts, AI serves to maximise destruction and speed up armed wars, the risks of undoing any resolution efforts if implemented offensively are incredibly high.

AI use in modern warfare cannot be ignored; it is revolutionising the modern conflict landscape and has already seen extensive use. In the Gaza conflict, it has been proven to be efficient at target identification and maximising both operational and military resource efficiency, it is one of the factors that allowed Israel to succeed at their invasion. However, it doesn't come without risk, and using AI in war raises questions of escalating conflicts and the fact, if left without human intervention, control life-and-death in a manner never seen before.