

# The Ethical Implications of Military AI Deployment: A Case Study of DARPA and GIDE Systems

## Introduction

Over the last few years advancements in technologies and capitalistic entrepreneurial spirit, particularly in the U.S., have led to huge advancements in the use of Artificial Intelligence(AI). This has also led to more use of AI in military operations such as the AI systems under DARPA's autonomous combat systems and GIDE predictive technologies have been breakthrough innovations in warfare. They promise efficiency and a higher level of precision in decision-making but bring up several moral and ethical concerns. The use of AI in warfare poses the question of whether such technologies are able to meet moral principles concerning human autonomy, accountability, and the prevention of harm. This paper tries to deal with these problems using the ethical frameworks of Kantian ethics, Virtue ethics, and Utilitarianism. AI in military applications is a moral issue that needs to be taken up for serious ethical scrutiny; balancing innovation and responsibility, this analysis identifies a middle ground where ethical frameworks can guide AI integration while addressing its risks.

## Case Study: DARPA and GIDE Systems

The DARPA autonomous combat systems and GIDE predictive algorithms exemplify this duality of military AI. While GIDE promises conflict resolution through the analyses of huge data sets to anticipate global instabilities, the autonomous systems under development, typified by those being pursued by DARPA, are susceptible to virtually all forms of attack, including data bias and tampering—potentially with catastrophic results. The use of abnormally large data sets also prevents many risks that are currently seen in generative AI models such as a lack of

curation to ensure accurate information, the idea of recursive pollution where a model builds on false information repeating the cycle of producing garbage outputs. Building better Large Language Models(LLM) and Machine Learning(ML) models to provide more accurate outputs is one solution to this issue as well as ensuring proper guidelines and risk assessment is applied to generative AI models which will be a process that has begun to occur in states such as Texas and in other parts of the world like the EU. This will start to occur more over the next several years [3] [4].

## **Key Facts**

GIDE's Predictive Potential: GIDE analyzes large datasets in order to forecast emerging conflicts and provide a proactive approach to conflict resolution. Accuracy, however, is conditional on the quality of data and the interpretive reliability of the algorithms applied. Misjudgments could lead to unnecessary military escalations. One use case for GIDE is submarine monitoring "If satellite imagery shows signs that a rival nation's submarine is preparing to leave port, for instance, the AI could flag that mobilization knowing the vessel will likely leave soon. Military analysts can take hours or even days to comb through this information"[1].

DARPA's Autonomous Combat Systems: They are supposed to enhance decision-making in complex combat situations but come with associated risks of targeting errors and reduced human oversight. Fully autonomous drones have been tested by the U.S. Department of Defense, which have presented challenges in algorithmic transparency and ethical accountability. One of DARPA's programs ACE aims to "Increase air combat autonomy performance in local behaviors (individual aircraft and team tactical) Build and calibrate trust in air combat local behaviors, Scale performance and trust to global behaviors (heterogeneous multi-aircraft), Build infrastructure for full-scale air combat experimentation"[2].

## **Ethical Analysis**

## **Kantian Ethics: Autonomy and Accountability**

Immanuel Kant's deontological ethics emphasizes respect for human dignity and the need for moral autonomy. In Kantian terms, moral agents must retain responsibility for actions that affect human lives. Delegating life-and-death decisions to machines fundamentally undermines this principle. Human Dignity and Decision-Making: Kant's categorical imperative stipulates that humans should always be treated as ends, not means. Autonomous systems remove moral agency from the decision-making process, reducing humans to mere instruments of algorithmic processes. This directly conflicts with Kant's ethical framework.

Accountability Challenges: This shift of responsibility for outcomes to autonomous systems blurs the chain of accountability. Kantian ethics requires clear moral agency, which is missing in cases of errors or harms that occur based on an autonomous decision. For instance, DARPA systems may misidentify civilians as combatants due to either erroneous data or algorithmic biases, thus breaching the principle of respect for humanity. Kantian ethics would insist on a strong human oversight to ensure decisions abide by moral laws.

## **Virtue Ethics: Leadership and Practical Wisdom**

Virtue ethics by Aristotle emphasizes the development of moral character and practical wisdom—*phronesis*, especially for those who hold leading positions. Military operational leadership calls for balancing such moral virtues as justice, courage, and prudence. Moral Erosion Through AI Dependence: The risk of erosion in moral reasoning skills of commanders is that decisions increasingly devolve to machines. Diminution of virtue undermines the character that allows for ethical leadership.

Ethical Deployment Leadership: Virtuous leaders will have to ensure that the AI systems complement, rather than replace, human judgment. In using DARPA's systems, for instance, commanders should regard AI as a tool for making informed decisions, not as an autonomous actor that makes a move without them.

Aristotle's model brings into focus the leadership facet in setting ethical standards for AI deployment—that is, keeping military operations grounded in human virtues.

Utilitarianism tries to bring in an action that creates the greatest benefit with the least amount of harm. Military AI has obvious utilitarian benefits but also considerable risks.

### **Act Utilitarianism:**

Predictive systems from GIDE would prevent wars, these GIDE systems are responsible for the identification of emerging threats. In that respect, from an act utilitarian viewpoint, having the ability to analyze extensive datasets and anticipate potential conflict, maximizes the overall well-being due to preventing war and minimizing human suffering. Such efficiency preserves not only lives but also puts needed human resources toward more critical roles that increase the benefits to society. However, act utilitarianism warns also of the unintended consequences of poorly interpreted or wrong predictions. If the outputs from GIDE are wrong, then the outcome of those actions increases harmful, pointless conflict for which the overall benefits would be negative. These risks underline careful evaluation and oversight to make sure each action is taken that achieves the greatest good.

### **Rule Utilitarianism:**

The risks associated with incorrect AI predictions should be offset by the creation of strict rules governing its deployment. Rule utilitarianism sets a high ethical value on formulating standardized protocols that ensure actions are in line with utilitarian goals. For instance, human oversight should be mandatory, while lethal systems that can operate completely autonomously should not be allowed to prevent unethical situations and maintain accountability. By putting in place strict protocols that aggressively balance between minimizing harm and maximizing benefit, DARPA's autonomous systems operate ethically and effectively. This balance between immediate, situation-specific benefits and broader, standardized safeguards shows how rule

utilitarian principles may guide responsible military AI deployment, achieving long-term societal benefit without compromising moral accountability.

### **Ethical Issue and Resolution:**

The moral problem of military AI is how it can violate well-established core ethical principles, such as autonomy, accountability, and prevention of harm. Drawing attention to the risks of removing human moral agency, Kantian ethics provides a great emphasis on this issue. Virtue ethics focuses on the need for leadership with developed moral character, and utilitarianism on minimizing unintended harms. Applying these solutions within the three ethical frameworks discussed, AI being implemented in warfare could potentially minimize human casualties and thus lead to a better societal outcome. However along the way it is to be expected that AI will fail as most things do before reaching a consistent outcome that is optimal. This means that the developers and military strategists that oversee the use of AI ensure proper testing of what they are developing before deploying.

### **Conclusion**

The integration of AI into military applications, such as DARPA with its autonomous combat systems and GIDE with its predictive algorithms, represents a critical ethical decision in the evolution of warfare. These technologies enable unprecedented precision, efficiency, and proactive conflict resolution, yet they raise profound ethical concerns related to autonomy, accountability, and the risk of harm. Analysis through the lens of Kantian ethics, virtue ethics, and utilitarianism makes it clear that what is urgently needed is a balance of approaches.

Kantian ethics emphasizes the necessity of maintaining human moral agency and responsibility, warning against anything that could lead to giving life-and-death decisions over to machines. Virtue ethics maintains that it is moral leadership and practical wisdom that will ensure AI supplements human judgment rather than supplants it. Utilitarianism, on its part,

insists on the benefit-maximizing/ harm-minimizing imperatives through strict operational protocols and ethical safeguards.

In all these complexities, robust human oversight, rigorous testing, and international cooperation are called for. Setting ethical standards on a global scale for military AI could minimize risks while innovating responsibly. If AI development can be grounded on such ethical premises, its potential could be better utilized in enhancing security without compromising human dignity or human moral integrity. Under the guidance of ethical scrutiny and virtuous leadership, military AI can shape a future where technological progress does not hurt human values.

### **Citations:**

1. <https://gizadeathstar.com/2024/08/the-pentagons-predictive-ai-a-glance-back/>
2. <https://www.darpa.mil/program/air-combat-evolution>
3. <https://www.insideglobaltech.com/2024/11/13/texas-legislature-to-consider-sweeping-ai-legislation-in-2025/>
4. <https://ai-regulation.com/gpa-statement-data-scraping-and-privacy-protection/>

