



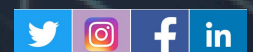
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ENHANCING IMPACT OF DRONES USING ARTIFICIAL INTELLIGENCE (AI) BY COL TUSHAR ANAND

ORGANISED BY CENJOWS
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Drones have evolved from basic remote-controlled machines to autonomous, AI-driven systems capable of real-time decision-making. The integration of Artificial Intelligence (AI) with drones has enhanced their capabilities, making them smarter, faster and more efficient across industries.

In agriculture, AI drones optimise irrigation, detect diseases, and boost yields through multispectral imaging. Environmental conservation benefits from AI-powered drones tracking wildlife, detecting deforestation and monitoring climate change. In urban planning and logistics, drones assist in traffic monitoring, infrastructure inspections and last-mile deliveries, with companies like Amazon Prime Air leading the way.

AI-powered drones are revolutionising disaster response by providing real-time damage assessments, search and rescue operations and emergency supply deliveries in crisis zones. In healthcare, AI drones are transporting blood, organs and medicines to remote areas, improving accessibility and emergency response efficiency.

The military sector is witnessing the greatest impact of AI-driven drones. These UAVs conduct autonomous reconnaissance, precision strikes and electronic warfare, disrupting enemy operations and gathering intelligence. In conflicts like the Russia-Ukraine war, AI drones, including kamikaze and interceptor UAVs, have transformed modern combat. Swarm drones, operating in synchronised formations, represent the future of highly coordinated drone warfare.

Despite their vast potential, AI-powered drones face significant challenges. Battery life limitations, regulatory restrictions and cybersecurity threats pose risks to widespread adoption. Ethical concerns regarding autonomous decision-making in surveillance and

warfare also raise critical questions—who is responsible if an AI drone makes a life-altering mistake?

The future of AI-powered drones is limitless. Advancements in swarm intelligence, edge computing and quantum AI navigation will enhance their efficiency. Soon, drones could manage urban air traffic, revolutionise security and deliver critical medical aid autonomously.

In conclusion, AI-powered drones are reshaping industries, strengthening security and saving lives. Their rapid evolution demands careful regulation and strategic collaborations to ensure responsible deployment. The sky is no longer the limit—it's just the beginning.