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**SCHOOL OF  
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Issue

**Brief**

Series



## **“AI and Surveillance Implications”**

Issue Brief: IB-2026-44

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Cite this Report as: Nandha R.K, H. (2026) “AI and Surveillance Implications” [online]. Available at:  
<https://www.kspp.edu.in/issue-brief/ai-and-surveillance-implications>.

## AI and Surveillance Implications

### Abstract

This paper examines the role of artificial intelligence in modern surveillance and its implications for security and military operations. It traces the evolution of surveillance from human intelligence to advanced technological systems and highlights how AI has enhanced data collection, analysis, and threat detection across domains such as border security, aerial surveillance, financial monitoring, and cyber defense. The paper argues that AI improves speed, accuracy, and coverage of surveillance activities, enabling predictive threat assessment and efficient decision-making. However, it also highlights key risks, including errors, data quality concerns, and over-reliance on automated systems. The paper concludes by stressing the need for human oversight in AI-driven surveillance.

### Introduction

“Be subtle, be subtle, and use your spies for every kind of business”

– Sun Tzu

The term surveillance has different meanings depending on the context in which it is used. But in all domains, surveillance broadly refers to the monitoring of an individual, or a group of people, an organization or an environment to gather information about their behaviour or their actions. When discussed in the parlance of security, surveillance includes the monitoring the behaviour, actions, transactions, etc. of target individuals, organizations, environments to gather information (What Is ISTAR? Intelligence, Surveillance and More., 2025).

Surveillance has been prevalent as long as statecraft has existed. Starting from Kautilya’s Arthashastra to Machiavelli to modern day foreign policy and security experts, major statecraft geniuses have advocated the use of spies for intelligence gathering. This puts human intelligence as the first and foremost method of surveillance. Even till date, spies are existent in multiple parts of the world secretly (or not so secretly) surveilling and gathering information. Human intelligence (HUMINT) forms the foundational layer of surveillance. Humans have been,

continue to be and will be the fulcrum of surveillance. Deploying spies and the craft of espionage for infiltrating into an enemy's space to gather information has been in existence for a long time now.

## **Background**

With the advent of modern technologies and ever ongoing conflicts between states and with the emergence of multiple non-state actors, the importance of surveillance has hit the prick points for states and non-states all over the world. Starting from satellites, till today the evolution of unmanned aerial vehicles (UAVs), the increasing usage of biological and chemical weapons and means for surveillance operations, continues to evolve. Satellite Intelligence (SATINT) Communications Intelligence (COMINT) are two prominent sources of gathering information from surveillance. COMINT includes a wide variety of activities such as wiretapping, using codes for discrete communications, etc (Awati, 2024).

In ancient times, the use of spies was to gather intelligence from enemy states, ensure the sovereignty of their nation was not compromised and the enemy state was weakened. But as times changed, the nature of war also changed, so did the aim of warfare. The expansion of globalized interests made nations want a say in the affairs of other nations as well. Breaking codes, recruiting local assets, planting moles inside enemy groups or facilities, and helping uncover or stop enemy spies have become a day-to-day routine of people in this surveillance field. The emergence of such intelligence organizations – such as the Central Intelligence Agency (CIA), the SVR in Russia, the Mossad in Israel, the Intelligence Bureau and Research and Analysis Wing in India – shows the importance nations give to surveillance and intelligence gathering in modern times.

## **Role of Surveillance**

Keeping these spy-tales aside, surveillance plays a huge role in helping military operations. Keeping borders under constant surveillance has become one of the most important and fundamental mandates of military operations, thus proving the importance of border patrol.

Human trafficking, illegal arms trafficking, smuggling narcotics and contraband substances have become more common than ever before in today's times. The rise of fundamentalist and radical groups have given rise to a sizable number of terrorist organizations. With cross-border terrorism claiming hundreds of lives every single year, security personnel are under a constant vigil today to keep things under control.

The interesting part is, the organizations and people involved in such activities tend to have better equipment and technology, thus making it imperative for military personnel to also have a better grip of the latest technologies. The advent of money laundering, the increased circulation of fake currency notes and the rise of organized crime gives all the necessary financial flow to keep the illegal activities running. The sad part is that these highly volatile activities take place in huge numbers in sensitive areas, such as regions having international borders. And if the nation across the border is in a highly volatile and unstable environment, the dangers faced by the regions on both sides of the border are immense. The finest example of such a situation is the Kashmir region. What is happening in the Golden Triangle and Golden Crescent region and how the activities here are keeping these regions in a vicious cycle of crime and underdevelopment shows the importance of security personnel and military operations.

## **Military Operations**

Talking about military operations, the usage of balloons during the 18th century is probably the first usage of technological innovation in military surveillance. During these times, human eye and a sketch pad were the tools for capturing images, and these proved to be crucial during the American Civil War and the Franco-Prussian War of 1870-71. This evolved during the First World War into using photography combined with these techniques. Another important innovation during the Second World War was the radar – using short radio waves to locate aircraft and other objects at a distance (Wilson, 2012).

During the World War times, the impetus given by the war-waging nations to the development of science and technology to inevitably cater to the growing needs of their respective defence forces led to many inventions that gave them a critical edge over their rival

forces. Development of microwaves, closed-circuit TV, satellite surveillance, wireless communications, remote control, virtual reality, data-mining and the Internet all find their origins during the war times for military applications (Wilson, 2012). The development of satellites – the “Race to the Space” marked a significant milestone in technological advancement, but more importantly it made a statement to the entire world that surveillance is going to be of importance going forward. The launch of satellites made possible a plethora of opportunities to truly move towards a “surveillance world” – the development of Global Positioning System (GPS) , UAVs, softwares to process the huge amount of data produced, ways to track the means of illegal financing, etc.

One of the fine examples of how modern technologies truly helped in surveillance was how the CIA was using American satellites to monitor the nuclear developments in India, and how Indian scientists had to precisely calculate and predict the timing at which the American satellites will be having their focus area over India, so as to ensure that India’s nuclear tests were successful (Explainers, 2024).

## **Technology Evolution**

The evolution of technology in today’s modern times has helped surveillance and reconnaissance in multiple aspects. Using satellite technology to map subterranean caves, bunkers and cables, to using geographical positioning systems to create interactive maps that facilitate precise situational awareness, the surveillance methods have evolved rapidly. Military vehicles and weapons systems are being equipped with night vision and video facilities, sensors and radars are constantly monitoring vast swathes of geographical area which in turn generate vast amounts of information which need to be analysed, while spyplanes and constant monitoring networks intercept radar, microwave and telephone communications (Wilson, 2012).

The latest advancement in aerial surveillance is the deployment of unmanned aerial vehicles (UAVs), commonly known as drones. Fitted with the latest advanced camera with the best in class features, these drones can cover areas very close to Earth which could not be covered by aerial vehicles flying at a higher altitude. These drones will eventually generate a

humongous amount of data – both images and videos – and AI can be immensely useful in processing the feed from these sources. Using facial recognition and image recognition, a properly trained AI model can differentiate between target people and target assets from civilians and non-threat assets, and based on this distinction the AI can further suggest as to what action can be taken further. The same applies for image feed from satellite data also. AI can be useful in detecting anomalies in movement on ground, helping identify and distinguish between equipment, animals, humans and other objects (Sentient Digital, Inc., 2024).

Another important area is border patrol and surveillance. The concept of “silent sentry” is becoming popular wherein robots are used for constant surveillance across borders, especially where there are high chances of conflicts. These robots are fitted with the latest sensors and cameras and suitable AI models drive them to constantly monitor borders and lookout for anomalies in movements, thus helping scan for illegal movements and shipments across the border (Ministry of Defence, Government of India, 2023). AI can help detect anomalies such as unauthorised and illegal movements, hidden objects and enemy patrols, all these without creating human fatigue. These inputs help in a holistic way of predicting threats and attacks, creating “Predictive Threat Intelligence”. This includes AI analysing previous records of when and where high crimes and conflicts and attacks have happened and suggesting to be prepared accordingly to neutralise such threats. AI when combined with thermal cameras, seismic sensors, and UAVs ensures 24/7 cross-border surveillance, even in difficult terrain. It can detect unusual patterns such as night-time movement or digging activity. AI also enables rapid authentication to support legal cross-border movements (Innefu, n.d.).

## **Funding and Data**

Funding is the most foundational yet least talked about topic in terms of illegal activities. Security and intelligence agencies have a tedious task of monitoring bank accounts, looking for any unusual kind of transactions. AI can make things easy here by analysing the previous bank transactions of accounts and recognizing the patterns of transactions, thus differentiating between anomalous spending and usual spending. Also, with the enormous amount of data the AI has a

hold over, it can simultaneously compare multiple records of a bank account holder, such as Income Tax Returns, and make a profile of the person, thus creating a risk-profile for everyone, if needed. Based on these analyses, AI can help differentiate accounts as flagged and not-flagged, and it can suggest which accounts to be constantly monitored. Once decided, it can also keep a constant watch over the flagged accounts, thus notifying if any transactions have happened, reducing the response time from security agencies.

In today's era, data is the new gold. Every major organization, one way or the other, wants to get hold of data and thus large databases are an easy target for unwanted entities. AI can help flag unusual logins into secure databases, run diagnostics 24/7 and look for malware and viruses, protect sensitive programs, networks and computers by continuously monitoring and looking for unusual patterns that resemble cyber threats. AI can also react to such zero-day vulnerabilities quickly, auto-deploy anti-malware measures, thus reducing the risk such cyber weapons might pose to critical assets long before they cause significant damage (Defence Industries, n.d.). AI also has the capability to simulate numerous combinations of scenarios, thereby preparing the security forces to face the worst on-ground scenarios. These reduce the human cost in actual battlefields, thus helping win actual battles.

## **Conclusion**

With the advent of Artificial Intelligence, there exist both challenges and a lot of possibilities for surveillance and military operations. Undoubtedly AI is changing the character of war today, but it is in both positive and negative ways. By enhancing the coverage of surveillance, helping conduct Intelligence, Surveillance, Target Acquisition and Reconnaissance (ISTAR) operations more effectively and efficiently with increased hit rates, AI has been a game changer. But its negative side also has to be looked at. AI also has the potential to generate false positives, where something which is not a threat is classified as threat. Likewise, an actual threat not being recognized as a threat is another scenario. Both cases will prove to be fatal. So it is highly essential to have human intervention in applications of AI to surveillance operations. Another matter of concern is the quality of data the AI is being trained on. With the increased

usage of synthetic data to train the AI models on, it is important to ensure that the datasets are adequately representative and actual data, and not only relying on synthetic data. A solution or intervention needs to be found to address the issue of AI training datasets being hacked and infected with fake data. All things said, AI has truly revolutionized the way in which ISTAR operations are being conducted in today's world, and they will continue to keep revolutionizing them.

## References

Awati, R. (2024, June 10). communications intelligence (COMINT). *WhatIs*.

<https://www.techtarget.com/whatis/definition/COMINT-communications-intelligence>

Defence Industries. (n.d.). *How AI is enhancing military surveillance and border security*.

<https://www.defence-industries.com/articles/how-ai-is-enhancing-military>

Explainers, F. (2024, May 11). Pokhran-II: When India fooled the CIA and successfully conducted its nuclear test. *Firstpost*.

<https://www.firstpost.com/india/pokhran-ii-when-india-fooled-the-cia-and-successfully-conducted-its-nuclear-test-10660491.html#:~:text=It%20has%20also%20been%20reported,underground%20nuclear%20tests%20in%20Pokhran>.

Innefu. (n.d.). *How AI is useful in the military: 11 game-changing applications in modern warfare*.

<https://innefu.com/how-ai-is-useful-in-the-military-11-game-changing-applications-in-modern-warfare/>

Ministry of Defence, Government of India. (2023). *Artificial Intelligence* [PDF].

<https://www.ddpmod.gov.in/sites/default/files/2023-11/ai.pdf>

Sentient Digital, Inc. (2024, June 20). *Military Applications of AI in 2024- Sentient Digital, Inc.*

<https://sdi.ai/blog/the-most-useful-military-applications-of-ai/>

Maris. (2025, July 24). *What is ISTAR? Intelligence, Surveillance and more*.

<https://www.maris-tech.com/blog/what-is-istar-intelligence-surveillance-target-acquisition-and-reconnaissance/>

Wilson, D. (2012, January 1). Military surveillance. *Figshare*.

[https://sussex.figshare.com/articles/chapter/Military\\_surveillance/23431922?file=411450](https://sussex.figshare.com/articles/chapter/Military_surveillance/23431922?file=411450)

71