
1-Day Workshop Plan on “AI Applications in Defence” — structured, practical, and suitable for academies, training centers, defence R&D units, or corporate seminars.

Duration: 6–7 Hours

Audience: Defence personnel, researchers, engineers, defence tech startups, faculty

Participants will learn how AI is transforming modern defence systems in surveillance, warfare, logistics, simulation, cybersecurity, and decision-making.

By the end, they will understand:

- Key AI technologies in defence
- How AI enhances situational awareness
- Autonomous systems (drones, robots, UGVs)
- AI in predictive maintenance & logistics
- AI-driven cybersecurity and threat intelligence
- Ethical & security challenges

09:30 AM – 10:00 AM — Introduction to AI in Defence

Topics

- Evolution of AI in modern warfare
- AI in Indian defence modernization
- Key technologies: ML, DL, NLP, computer vision, robotics
- Shift toward *cognitive battlefield*

Activity:

Short quiz: “What AI systems are currently used in defence?”

10:00 AM – 11:00 AM — AI in Surveillance & Reconnaissance (ISR)

Topics

- AI-based video analytics
- Target detection & object classification
- Satellite image interpretation
- Border security and thermal imaging AI
- Maritime surveillance (ship identification)

Demo (optional):

- Run a model that detects objects from satellite/airborne images

11:00 AM – 12:00 PM — Autonomous Defence Systems

Topics

- AI for drones (UAVs)
- Unmanned ground vehicles (UGVs)
- Autonomous underwater vehicles (AUVs)
- Swarm intelligence for combat drones
- AI-assisted missile guidance (non-sensitive conceptual level)

Activity:

Simulate drone path planning using an AI algorithm.

12:00 PM – 12:30 PM — Break

12:30 PM – 01:30 PM — AI in Defence Logistics & Predictive Maintenance

Topics

- Predicting equipment failures using ML
- AI for spare-parts forecasting
- Fuel consumption optimization
- Smart warehouse & supply chain for defence
- Fleet health monitoring (tanks, aircraft, ships)

Hands-On:

Build a simple predictive maintenance model (sample dataset provided).

01:30 PM – 02:30 PM — AI in Cyber Defence

Topics

- Intrusion detection using AI
- Detecting disinformation & deepfakes
- Behaviour-based threat modelling
- Securing communication with AI
- Malware & anomaly detection

Demo:

Live demo of AI detecting anomalies in network logs.

02:30 PM – 03:30 PM — AI-Enabled Decision Support Systems

Topics

- Battlefield simulation using AI
- Threat prioritization algorithms
- Scenario prediction for commanders
- AI for mission planning (conceptual)

Activity:

Run a simple *AI war-game decision simulator*.

03:30 PM – 04:00 PM — Ethical, Security & Policy Considerations

Topics

- Human-in-the-loop vs autonomous systems
 - Compliance with international standards
 - Risks: bias, unpredictability, cyber threats
 - Future of AI in defence
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04:00 PM – 04:30 PM — Final Q&A + Certificates + Workshop Feedback

Deliverables for Participants

- Workshop slides (PDF)
- Sample datasets for AI experiments
- Code notebooks (basic Python/AI models)
- Certificate of completion
- Project ideas for defence AI research

Instructor: Mr Suresh Tripathi is a founder of Geosun Pty Ltd an Australian company registered in year 2000 to provide AI corporate training, data center solutions and data pipeline end-to-end cloud platform. He has nearly 25+ years of work experience in digital data analytics integrated with AI and tech platforms. His education qualifications include master degree in Statistics from India, master degree in Geostatistics from Australia and master degree in Geoscience from Australia. He completed his AI certificate courses from Stanford Business School from California and High Impact Leadership from Cambridge University, UK. He has worked in Australia and US focusing his career on data strategy, tech platforms, and developing in-house training. He has worked with range of industries in Australia and US that include Deloitte, Flybuys, Ambulance Victoria, CFA (Emergencies Services), Avexa, Covance, Avance Clinical (Pharmaceuticals), Intelligen, Commonwealth Bank, Hackett Group (US), Health and Safety Sphera Solutions(US), Vic Government (Environment, water and energy), Waste Management (US), Outfront Media (US), Adani Mining (Australia) and Fura Gems Industries (Dubai).

Fee: Rs 25,000 per participant plus GST payable to GeosunAI Tech Cloud Pvt Ltd. RTGS/Cheque/ PhonePe via below link form.

Bank: Punjab National Bank

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