Government Capacity Building

Program Brochure · 2026

AI & ML FOR DEFENCE INTELLIGENCE

AI for intelligence analysis.

Advanced ↗ 64 Hours ↗ SAM-DEFALM ↗

Government Capacity Building

Capable institutions. Secure nation.

20 programs in this track



8

modules · hands-on labs · capstone project

Inside this brochure

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AT A GLANCE

Level	**Advanced**
Duration	**64 Hours**
Modules	**8**
Certificate	**SAM-DEFALM**

Program overview

AI for intelligence analysis.

Apply AI and machine learning to intelligence analysis and decision support.

Intelligence analysts face rapidly growing volumes of text, imagery and sensor data that cannot be reviewed manually. This program shows defence personnel how AI and machine learning support the intelligence cycle, from Python-based analysis and text analytics to imagery classification and decision-support models, while emphasising model validation, risk, ethics and secure deployment so that AI strengthens rather than replaces analyst judgement.

DELIVERY

Instructor-led · Live virtual · Blended

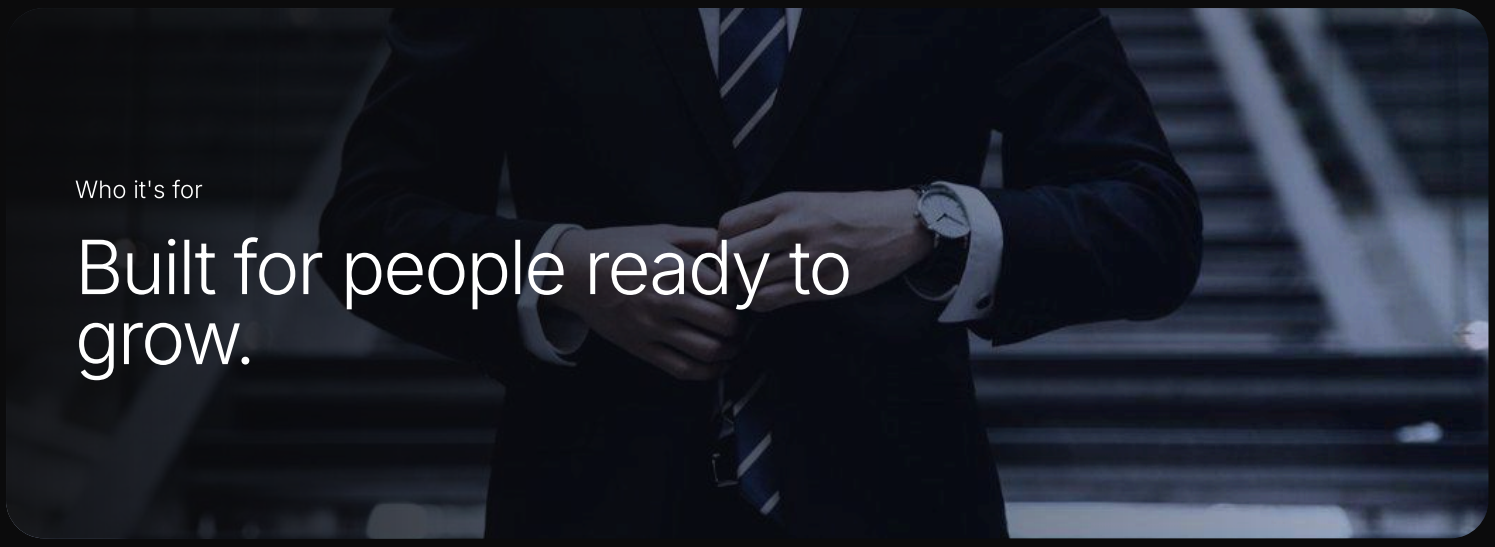


LEVEL
Advanced

DURATION
64 Hours

CERTIFICATION
SAM-DEFALM

TRACK
Government Capacity Building



Who it's for

Built for people ready to grow.

01

Government officials

Cyber awareness, AI for public service, e-governance

02

Senior IAS / IPS officers

Technology leadership and AI policy

03

PSU workforce

IT security, OT/ICS/SCADA, digital skills

04

Law enforcement & defence

Cyber forensics, CERT ops, defence cyber

PREREQUISITES

- Experience in intelligence, analysis or defence IT 01
- Basic Python or programming familiarity 02
- Comfort with basic statistics and data 03

ROLES THIS PREPARES YOU FOR

- Intelligence analysts ↗
- Defence data scientists ↗
- Imagery and geospatial analysts ↗
- Decision-support system developers ↗
- AI assurance and evaluation officers ↗

Learning outcomes

What you'll be able to do.



01	Map AI and ML techniques to stages of the intelligence cycle
02	Prepare and analyse datasets using Python and pandas
03	Train and evaluate machine learning models for analysis tasks
04	Extract entities and topics from large text collections
05	Apply computer vision models to imagery using PyTorch
06	Assess AI risks and plan secure, assured model deployment

Program runway

Module by module.

8
modules · 64 hours

01	**AI for Intelligence Foundations** Intelligence cycle and AI, Machine learning concepts, Supervised and unsupervised learning	8 hrs
02	**Python for Intelligence Analysis** Python and notebook essentials, Data handling with pandas, Visualisation for analysts	8 hrs
03	**Machine Learning for Analysis** Classification and clustering, Feature engineering, Model evaluation metrics	8 hrs
04	**Text and Language Analytics** Text preprocessing, Topic modelling, Named entity recognition	8 hrs
05	**Imagery and Geospatial Analysis** Computer vision fundamentals, CNNs with PyTorch, Object detection concepts	8 hrs
06	**Decision-Support Models** Decision support system design, Risk scoring and forecasting, Network and link analysis	8 hrs
07	**AI Risk, Ethics and Assurance** Bias and data quality risks, Adversarial attacks on models, Explainability for analysts	8 hrs
08	**Deploying AI in Secure Environments** Data security and classification, Model lifecycle management, Air-gapped and edge deployment	8 hrs
★	**Capstone · Analyst Decision-Support Prototype** Assessment, capstone review and certification	

The syllabus.

Modules 01–03

Module 01

AI for Intelligence Foundations

8 hours

Hands-on lab
Map stages of the intelligence cycle to suitable AI techniques

TOPICS COVERED

- Intelligence cycle and AI
- Machine learning concepts
- Supervised and unsupervised learning
- Deep learning basics
- Human-machine teaming

Module 02

Python for Intelligence Analysis

8 hours

Hands-on lab
Clean and visualise an open-source event dataset using Python

TOPICS COVERED

- Python and notebook essentials
- Data handling with pandas
- Visualisation for analysts
- Working with structured reports
- Reproducible analysis practices

Python pandas

Module 03

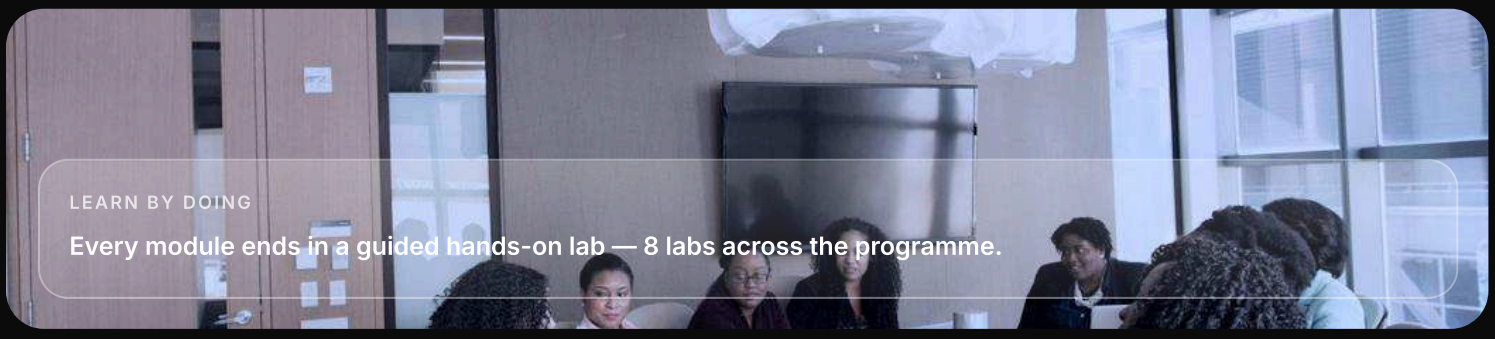
Machine Learning for Analysis

8 hours

Hands-on lab
Train and evaluate a classifier on a labelled open dataset

TOPICS COVERED

- Classification and clustering
- Feature engineering
- Model evaluation metrics
- Anomaly detection
- Avoiding overfitting



Syllabus, continued.

Modules 04–06

Module 04

Text and Language Analytics

8 hours

Hands-on lab
Extract entities and topics from a collection of open news reports

TOPICS COVERED

- Text preprocessing
- Topic modelling
- Named entity recognition
- Multilingual text challenges
- Language models for summarisation

Module 05

Imagery and Geospatial Analysis

8 hours

Hands-on lab
Fine-tune an image classifier on a public remote sensing dataset

TOPICS COVERED

- Computer vision fundamentals
- CNNs with PyTorch
- Object detection concepts
- Satellite imagery sources
- Change detection approaches

PyTorch

Module 06

Decision-Support Models

8 hours

Hands-on lab
Build a simple risk scoring dashboard from model outputs

TOPICS COVERED

- Decision support system design
- Risk scoring and forecasting
- Network and link analysis
- Dashboards for commanders
- Communicating uncertainty



LEARN BY DOING

Every module ends in a guided hands-on lab — 8 labs across the programme.

Syllabus, continued.

Modules 07–08

Module 07

AI Risk, Ethics and Assurance

8 hours

Hands-on lab
Evaluate a model's robustness and document its limitations in a model card

TOPICS COVERED

- Bias and data quality risks
- Adversarial attacks on models
- Explainability for analysts
- Testing and validation
- Legal and ethical considerations

Module 08

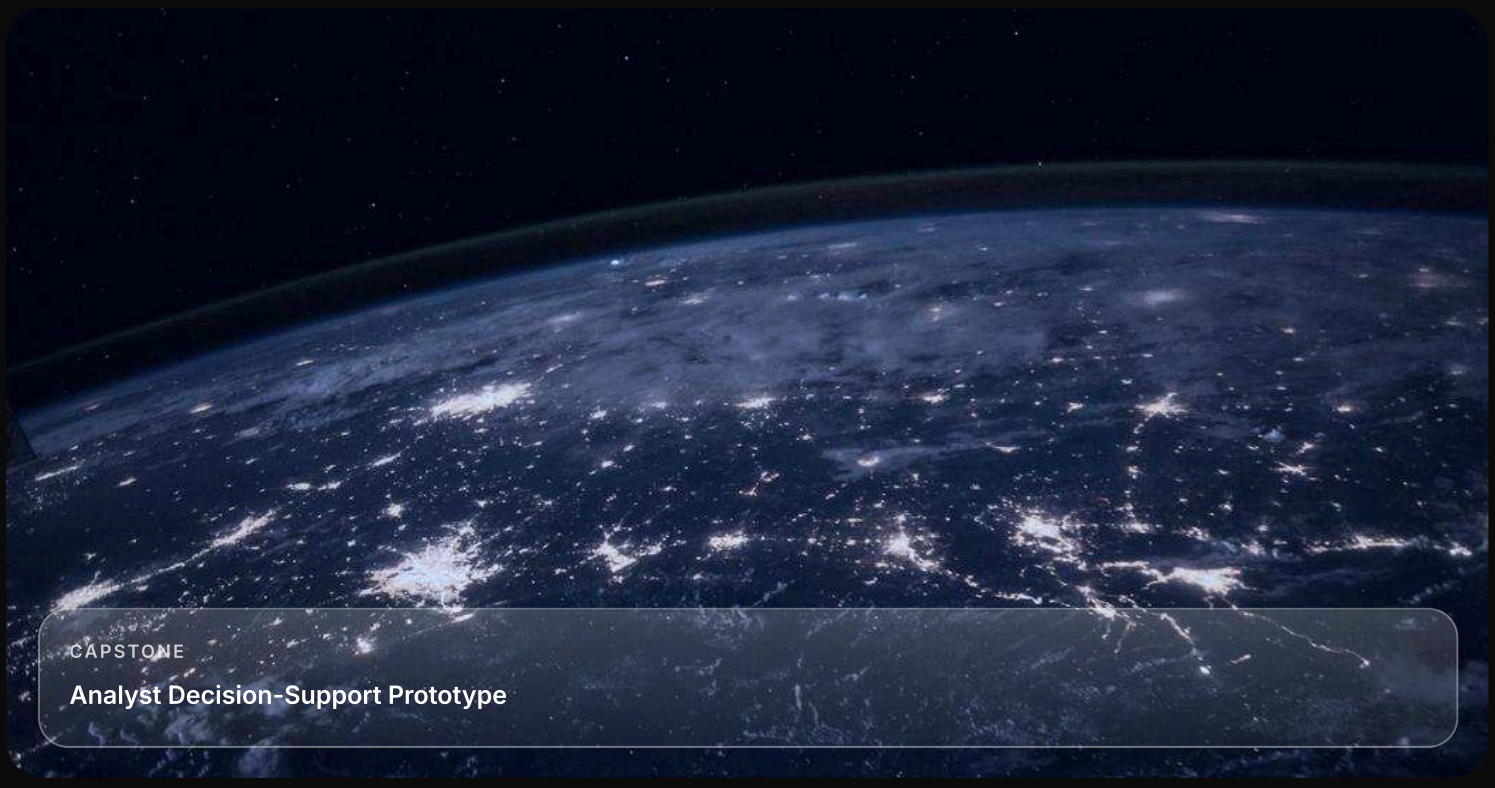
Deploying AI in Secure Environments

8 hours

Hands-on lab
Plan a secure deployment pipeline for an intelligence analysis model

TOPICS COVERED

- Data security and classification
- Model lifecycle management
- Air-gapped and edge deployment
- Monitoring model drift
- Adoption and change management



CAPSTONE

Analyst Decision-Support Prototype



Python
Automation & scripting

PyTorch
Deep learning framework

pandas
Data wrangling

What you will build

Understand AI for intelligence	01
Analyse imagery and text with ML	02
Build decision-support models	03
Manage AI risk in defence	04



01

Open-Source Text Analysis

Build a pipeline that extracts entities, topics and summaries from a collection of open news reports to support analyst review.

02

Imagery Classification Model

Fine-tune a PyTorch image classifier on public remote sensing data and evaluate its accuracy, errors and limitations.

03

Model Assurance Card

Test a trained model for robustness and bias, and document intended use, limitations and validation results in a model card.



Capstone project

Analyst Decision-Support Prototype

Build a decision-support prototype on open data that combines text or imagery analysis with risk scoring and a simple dashboard, then document validation results, limitations, ethical considerations and a secure deployment plan for review by a panel.

Real-world scenario ↗ Mentor review ↗ Portfolio ready ↗

Certification

SAM-DEFALM

Awarded on successful completion of the program assessments.

- MCQ assessments
- Practical lab evaluation
- Project & capstone review
- Final presentation



The SAM Learning Framework™

Scenario · Apply · Master · Mentor

Phase 01

Scenario

Real-world attack and use-case scenarios open every module.

Phase 02

Apply

Hands-on lab work, CTF challenges and live projects.

Phase 03

Master

Assessment, peer review and certification prep.

Phase 04

Mentor

Post-program career guidance and support.

DELIVERY MODELS

- Instructor-Led (ILT)
- Virtual Instructor-Led
- Self-Paced Online
- E-Learning Licensing
- Blended Learning
- Corporate Onsite
- Bootcamp Intensive

Learning path · Government Capacity Building

Where this program fits.

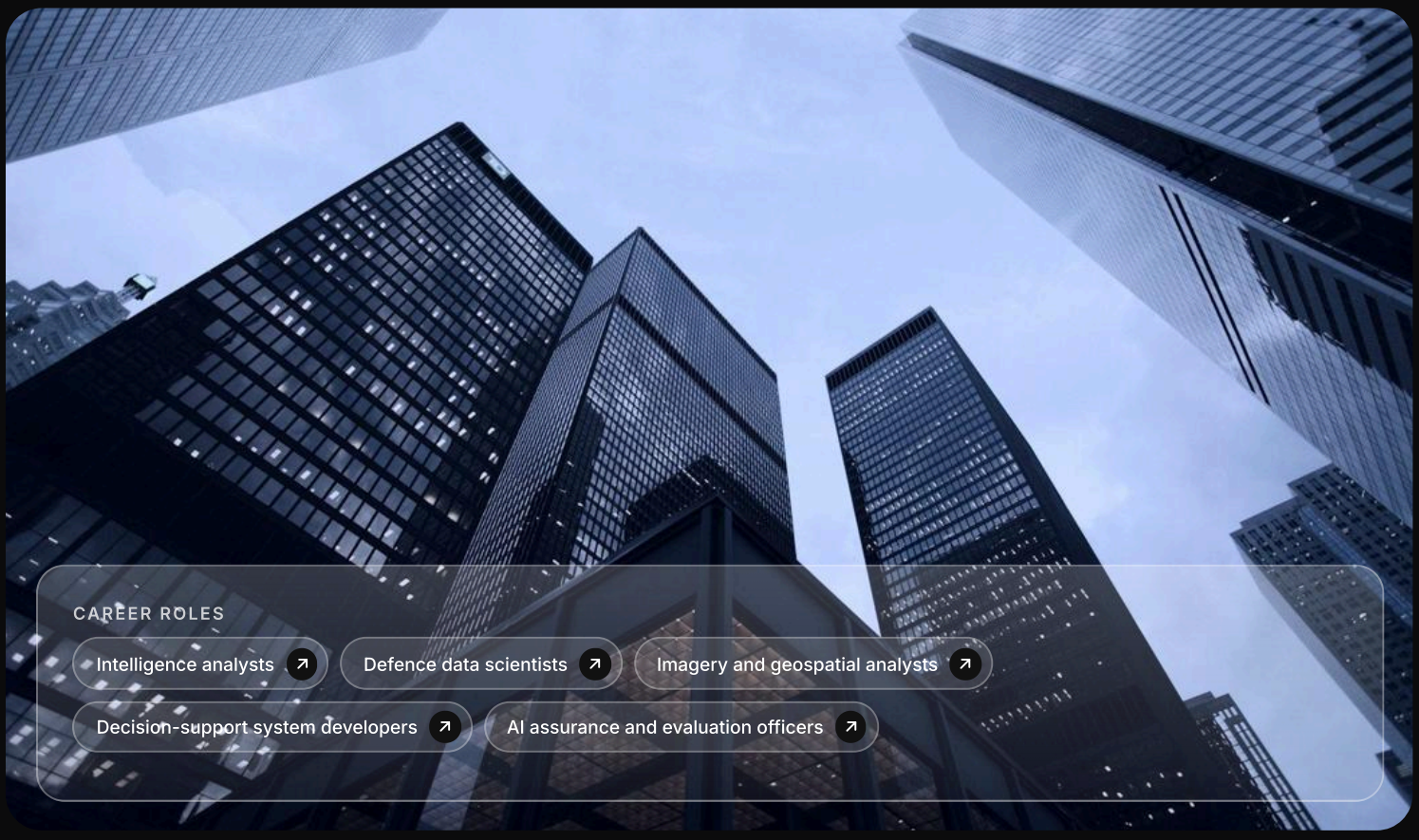
Foundation	Intermediate	Advanced	Expert	Executive
4 programs	5 programs	You are here	1 programs	2 programs

Before this

Digital Governance & e-Governance Platforms	32 Hours
Cybersecurity for Critical Infrastructure	40 Hours
AI Policy & Technology Regulation Workshop	24 Hours
OT/ICS/SCADA Security for Industrial PSUs	48 Hours

Up next

PSU Digital Transformation Advisory	Custom



Questions, answered.

Q01

Do I need prior experience to join?

Yes. This is an advanced-level program that assumes prior experience in intelligence analysis or defence IT, with basic Python. It moves quickly into frameworks, case studies and hands-on work, so participants should meet the listed prerequisites before enrolling.

Q02

How is the program delivered and scheduled?

The 64 hours program is instructor-led and can be delivered live virtual, in person at your institution, or in a blended format. Session timings and batch sizes are planned with the sponsoring organisation to fit official working schedules.

Q03

Will I receive a certificate?

Yes. Participants who meet attendance requirements and successfully complete the assessments receive the Samcommunity Academy SAM-DEFALM certificate. Assessments may include quizzes, practical exercises and a final capstone review, depending on the program format.

Q04

Will I get access to labs and tools?

Yes. Hands-on work uses a prepared lab environment with tools such as Python, PyTorch. Access details are shared before the program starts, and all exercises run in isolated, authorised environments rather than live production systems.

Q05

Is career or post-program support included?

The program is designed for capacity building of working professionals rather than placement. Participants receive learning resources, templates and guidance on further learning paths. Samcommunity Academy does not guarantee promotions, postings, jobs or salary outcomes.



Let's talk

START AI & ML FOR DEFENCE INTELLIGENCE.

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@samcommunity_

Learn practical skills. Grow with mentors.

Xylyn Samcommunity Private Limited · DPIIT-recognized startup · Surat, Gujarat, India