

ARTIFICIAL INTELLIGENCE

INTERMEDIATE

5 DAYS

OSINT in Artificial Intelligence

Conduct professional OSINT investigations with manual techniques and AI tools across five lab-first days - from advanced search and verification through prompt engineering to agentic research workflows.

Why OSINT?

Hands-on progression

Move from manual OSINT fundamentals through AI integration and prompt engineering to agentic multi-step research - learning by doing every session.

Professionally tested takeaways

Leave with a personal prompt library, a documented research workflow SOP, and an agentic governance framework built and stress-tested in class.

Speed with verification discipline

Use AI across the intelligence cycle while detecting hallucinations, misinformation, and synthetic media.

Ready for day one

Practise advanced search, footprint mapping, identity investigation, media verification, social analysis, and a competitive capstone investigation.

What you'll be able to do

- ✓ Execute a complete OSINT investigation using the intelligence cycle, from requirement definition to a structured intelligence report
- ✓ Apply advanced search techniques using Boolean operators, Google dorks, and specialist OSINT databases
- ✓ Map and analyse the digital footprint of an individual or organisation across multiple platforms
- ✓ Conduct username, email, and domain investigations using purpose-built OSINT tools
- ✓ Verify images and videos using metadata extraction and reverse search techniques
- ✓ Identify misinformation, fake profiles, and AI-generated content in open source material
- ✓ Use AI tools across the full intelligence cycle and critically evaluate output for accuracy
- ✓ Collect, organise, and preserve digital evidence using AI-assisted workflows
- ✓ Apply AI to summarise and compare large volumes of open-source information efficiently
- ✓ Conduct AI-assisted social media research and produce structured profile analyses
- ✓ Write, stress-test, and maintain a personal library of professional OSINT prompts
- ✓ Design and execute a repeatable AI-assisted research workflow with defined human oversight checkpoints
- ✓ Configure and run an agentic OSINT workflow to automate multi-step investigation tasks
- ✓ Assess and manage the legal, ethical, and governance risks of AI-assisted and agentic research

Who this is for

- Security Analysts
- Threat Intelligence Analysts
- Compliance Teams
- Risk Analysts

- Investigators
- Research Professionals
- Digital Forensics Specialists
- Corporate Intelligence Teams

Curriculum

01 The Intelligence Cycle and Advanced Search in Practice

- Apply Boolean operators and Google dork techniques to surface non-obvious results
- Map a research question through the full intelligence cycle
- Build a practical baseline for structured OSINT investigations

02 Search Operators and Specialist Source Mastery

- Extract intelligence from WHOIS and company registries
- Use Wayback Machine, Shodan, and government open data portals
- Choose the right specialist source for each investigative need

03 Digital Footprint Analysis Across Platforms

- Map a subject's presence across seven platform categories
- Identify cross-platform investigative patterns and linkages
- Document findings in a structured footprint map

04 Username, Email, and Domain Investigation

- Trace usernames with Sherlock and related tooling
- Investigate email addresses with Hunter.io and EmailRep
- Run a full domain deep dive and record evidence sources

05 Image and Video Verification with Metadata Analysis

- Extract EXIF metadata from images and media files
- Run reverse image searches to find original sources
- Geolocate images using visual clues and open data

06 Identifying Misinformation, Fake Profiles, and AI-Generated Content

- Apply structured fact-checking workflows to open-source claims
- Detect AI-generated images, text, and synthetic media
- Spot fake profiles and coordinated inauthentic behaviour signals

07 Introduction to AI Tools - Capabilities and Limitations in OSINT

- Use Perplexity AI and ChatGPT on a live investigation scenario
- Compare AI-assisted findings against manual collection
- Build a personal AI limitations log covering hallucination, freshness, and bias

08 AI-Assisted Social Media Research and Profile Analysis

- Build a structured subject profile using AI support
- Analyse posting patterns and sentiment across platforms
- Map social network connections relevant to the investigation

09 AI Integration Across the Intelligence Cycle

- Re-run an earlier investigation using AI at every cycle stage
- Compare AI output against the manual baseline
- Identify where AI adds value and where verification is essential

10 AI for Evidence Collection and Information Organisation

- Capture and preserve digital evidence with AI-assisted workflows
- Organise a large heterogeneous evidence base
- Identify gaps and missing source coverage

11 AI Summarisation and Large-Volume Source Analysis

- Summarise long documents and multi-source material with AI
- Analyse large social datasets for investigative patterns
- Reconcile conflicting source material into a clear assessment

12 Hallucination Hunt and AI Output Verification

- Identify deliberate errors and fabricated citations in AI summaries
- Cross-check claims against primary sources
- Design a personal minimum verification standard

13 Core OSINT Prompt Patterns

- Build prompts for entity extraction and timeline reconstruction
- Create prompts for relationship mapping and source verification
- Iterate prompts until outputs are reliable and reusable

14 Advanced Prompt Techniques - Chain-of-Thought and Role Prompting

- Apply chain-of-thought reasoning to complex analytical tasks
- Use expert role personas for investigation workflows
- Improve depth and structure of AI-assisted analysis

15 Prompt Stress Testing and Failure Analysis

- Break and diagnose partner prompts under stress conditions
- Classify failure types and root causes
- Produce hardened, reliable prompt versions

16 Personal Prompt Library Build

- Consolidate prompts into a structured take-away library
- Annotate each prompt with use case and reliability ratings
- Prepare the library for day-one professional use

17 AI Research Tool Rotation and Workflow Design

- Sprint across Perplexity AI, ChatGPT, Gemini, and Maltego
- Compare tool strengths for research and mapping tasks
- Design and document a personal research workflow SOP

18 Agentic OSINT - Observation and Agent Design

- Observe a live agent investigation run
- Map risk points and human oversight checkpoints
- Design a multi-step agent task brief

19 Build and Run Your Own Agent Workflow

- Configure and execute an agent workflow in n8n
- Monitor oversight gates during execution
- Evaluate output against the original intelligence requirement

20 Capstone: End-to-End Investigation Challenge

- Complete a timed competitive investigation using the full toolkit
- Apply prompts, verification standards, and workflow SOPs from the programme
- Deliver a structured intelligence report with documented sources