



AI in Cybersecurity

Course Module	Content Overview	Duration
Introduction to AI in Cybersecurity	<ul style="list-style-type: none">- Role of AI in cybersecurity- Fundamental concepts- Application to security challenges	2 weeks
AI-Driven Threat Detection	<ul style="list-style-type: none">- AI models for threat detection- Anomaly detection- Behavioral analysis	3 weeks
Automated Incident Response with AI	<ul style="list-style-type: none">- Automating incident response- Threat mitigation- Response orchestration	2 weeks
AI for Vulnerability Management	<ul style="list-style-type: none">- AI in vulnerability management- Predictive analytics- Identifying vulnerabilities	2 weeks
Adversarial AI and Security	<ul style="list-style-type: none">- Adversarial techniques- Evasion tactics- Countermeasures	2 weeks
Ethical Considerations in AI Security	<ul style="list-style-type: none">- Privacy concerns- Data protection- Responsible AI use	1 week
Real-World Applications and Case Studies	<ul style="list-style-type: none">- Case studies- Successful implementations- Lessons learned	2 weeks
Hands-On Labs and Tools	<ul style="list-style-type: none">- Practical experience- Labs for detection- Response automation	2 weeks

