ETHICAL AI MASTER

(Navigating Governance, Compliance & Risk in the Age of Intelligent Systems)

Certificate of Completion: Ethical AI Master

Course Code: IT_HM_I_005/25

Duration: 40 Hours

Delivery Format: Hybrid

Target Audience:

This course is designed for students across various disciplines who are:

- Interested in the Ethical Implications of AI: Students eager to explore the societal impact of artificial intelligence, including issues like bias, fairness, privacy, and accountability.
- Studying AI or Related Fields: Students in computer science, data science, engineering, philosophy, social sciences, law, or any field where AI is becoming increasingly relevant.
- Seeking a Multidisciplinary Perspective: Students who want to understand AI ethics from a variety of viewpoints, including technical, philosophical, legal, and social.
- Aiming for Future Careers in AI: Students who plan to work in AI-related roles and want to develop a strong foundation in ethical AI principles to guide their work.

- Engaged in Critical Thinking: Students who enjoy analyzing complex issues, debating ethical dilemmas, and proposing solutions to challenging problems.

Program Objectives:

- Understand the fundamental principles of AI ethics and governance.
- Identify and mitigate biases in AI systems.
- Navigate the legal and regulatory landscape surrounding AI.
- Develop strategies for responsible AI deployment and risk management.
- Promote ethical considerations in the design, development, and use of AI.

Detailed Syllabus

Module 1 (6 hours): Foundations of AI Ethics & Governance

Objective: To introduce the core concepts of AI ethics and governance.

Topics:

- Understanding AI Ethics: Why It Matters
- Ethical AI vs. Unethical AI: Case Studies
- Core Principles: Fairness, Accountability, Transparency, Explainability (FATE)
- Societal Impacts of AI: Bias, Discrimination, Surveillance, Job Displacement

Activities:

- Mini-Project: Case Study Analysis: Students analyze an AI ethics scandal (e.g., Amazon's biased hiring AI, COMPAS Recidivism).

Module 2 (7 hours): AI Bias, Fairness & Transparency

Objective: To explore the issues of bias, fairness, and transparency in AI systems.

Topics:

- How Bias Enters AI Systems
- Techniques for Bias Detection & Mitigation
- Explainable AI (XAI) & Transparent Decision-Making
- Fairness in AI: Statistical vs. Social Definitions

Activities:

- Project: AI Bias Audit - Use Google's Fairness Indicators or IBM's AI Fairness 360 to detect bias in a dataset.

Module 3 (7 hours): AI Regulation, Compliance & Global Policies

Objective: To examine the legal and regulatory landscape surrounding AI.

Topics:

- Overview of AI Regulations: GDPR, CCPA, EU AI Act
- AI & Privacy Laws: Data Protection & Consent
- Corporate AI Governance Strategies
- The Role of AI Ethics Committees

Activities:

- Mini-Project: AI Policy Analysis - Compare AI laws from different regions and propose compliance strategies.

Module 4 (7 hours): AI Risk Management & Responsible AI Deployment

Objective: To develop strategies for responsible AI deployment and risk management.

Topics:

- AI Risk Categories: Security, Ethical, Legal, Reputational
- Risk Assessment Frameworks for AI Products
- AI Failures & Prevention Strategies
- Algorithmic Accountability & Human-in-the-Loop AI

Activities:

- Project: AI Risk Assessment Report - Students assess risks in an AI-powered product and recommend mitigation strategies.

Module 5 (6 hours): AI Ethics in Industry & Corporate Governance

Objective: To explore the application of AI ethics in various industries and corporate settings.

Topics:

- AI Ethics in Healthcare, Finance, HR, & Criminal Justice
- Building Ethical AI Products: From Design to Deployment
- Corporate AI Governance Frameworks & Best Practices

- AI & Social Good: How AI Can Be Used for Ethical Impact

Activities:

- Mini-Project: AI Ethics Code of Conduct - Students develop an AI ethics policy for a hypothetical company.

Module 6 (7 hours): Capstone Project - AI Ethics & Risk Mitigation Strategy

Objective: To develop a comprehensive AI ethics and risk mitigation strategy.

Activities:

Final Project: Students select an AI use case, identify ethical risks, and develop a governance & risk mitigation strategy.

Deliverables:

- AI Product Overview & Ethical Challenges
- Bias Detection & Mitigation Plan
- Regulatory Compliance Strategy
- Risk Management Recommendations

Learning Objectives:

By the end of this course, learners should be able to:

- Explain the fundamental ethical principles that should guide the development of AI systems, such as fairness, accountability, transparency, and explainability
- Identify various sources of bias in AI datasets and algorithms and evaluate techniques for mitigating these biases during the AI development lifecycle.
- Recognize key legal and regulatory frameworks relevant to AI development and deployment, including GDPR, CCPA, and the EU AI Act.
- Formulate and apply responsible AI development practices, including risk assessment, algorithmic accountability, and human-in-the-loop strategies.
- Advocate for and integrate ethical considerations into the design, development, and deployment processes of AI systems within organizations.