# Fairness, Accountability, and Transparency (FAT) in AI Research Training Course

Professional Development Training Course Outline

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|---|---|---|---|
| **Category** | Research and Data Analysis | **Duration** | 5 Days |
| **Base Fee** | $1,500 USD | **Delivery Mode** | Online / On-site Hybrid |

## Course Introduction

As artificial intelligence (AI) becomes more integrated into everyday life, the need for ethical, transparent, and inclusive AI systems is critical. Fairness, Accountability, and Transparency (FAT) in AI Research Training Course is designed to equip professionals, researchers, and policymakers with a deep understanding of how to identify, mitigate, and address bias, discrimination, and lack of accountability in AI systems. This course covers the legal, ethical, social, and technical dimensions of AI governance and encourages the development of responsible AI practices. Learners will explore how algorithmic decision-making can reflect societal inequities and how rigorous design frameworks can promote equity and trust in AI applications.

The course provides hands-on experience through real-world case studies, interdisciplinary tools, and cutting-edge research insights. Participants will gain expertise in implementing fairness-aware machine learning models, evaluating transparency in black-box systems, and enforcing accountability mechanisms in AI design and deployment. From regulatory policies to explainable AI (XAI) techniques, this course offers actionable strategies to uphold integrity and justice in algorithmic systems. Whether you're a technologist, social scientist, policymaker, or business leader, this course will enhance your capability to build or audit AI systems with ethical foresight and technical rigor.

## Programme Curriculum

**Fairness, Accountability, and Transparency (FAT) in AI Research Training Course**

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**Course Objectives**

1. Understand core principles of fairness, accountability, and transparency in AI systems.
2. Identify sources of algorithmic bias and discrimination in machine learning models.
3. Evaluate the effectiveness of explainable AI (XAI) techniques for transparency.
4. Apply ethically aligned AI frameworks in real-world projects.
5. Explore the impact of socio-technical systems on AI fairness.
6. Analyze regulatory standards such as GDPR and AI Act for AI governance.
7. Investigate case studies on algorithmic harms and discrimination lawsuits.
8. Develop tools for bias detection, fairness auditing, and accountability metrics.
9. Assess the role of human-centered design in mitigating AI harms.
10. Integrate interdisciplinary research from social sciences, ethics, and technology.
11. Examine the power dynamics and structural inequalities in AI deployment.
12. Communicate research findings to non-expert stakeholders and policymakers.
13. Create AI policies and guidelines promoting equity and inclusion.

**Target Audiences**

1. AI and Data Science Professionals
2. Government and Public Policy Officers
3. University Researchers and Academics
4. Ethics and Compliance Officers
5. Social Scientists and Human Rights Advocates
6. Technology Startups and Innovation Leaders
7. Journalists and Investigative Researchers
8. Legal and Regulatory Professionals

**Course Duration:** 5 days

**Course Modules**

**Module 1: Introduction to FAT in AI**

- Definition and history of FAT concepts in AI
- The importance of ethical and trustworthy AI
- Key stakeholders and impact domains
- Interdisciplinary relevance of FAT
- Global perspectives and current debates
- **Case Study:** Amazon’s AI hiring bias controversy

**Module 2: Algorithmic Fairness**

- Types of algorithmic bias (pre-processing, in-processing, post-processing)

- Statistical vs. individual fairness
- Fairness metrics and trade-offs
- Societal impact of unfair AI decisions
- Tools for fairness-aware learning
- **Case Study:** COMPAS risk assessment bias in criminal justice

**Module 3: AI Accountability Frameworks**

- Defining responsibility and liability in AI systems
- Accountability models: human-in-the-loop, oversight boards
- Legal precedents and tort implications
- Organizational accountability in AI deployment
- Ethical codes of conduct for AI research
- **Case Study:** Facebook algorithm and election interference

**Module 4: Enhancing AI Transparency**

- Transparency vs. interpretability
- Black-box models vs. white-box models
- Tools and techniques for model explainability
- Communicating AI decisions to non-experts
- Limits of transparency and information overload
- **Case Study:** XAI in healthcare diagnostics

**Module 5: Regulatory and Legal Dimensions**

- Global AI regulations (EU AI Act, GDPR, OECD AI Principles)
- Compliance checklists for organizations
- Human rights and AI frameworks
- The role of public institutions in regulation
- Penalties and remedies for AI violations
- **Case Study:** Dutch childcare benefits scandal and algorithmic profiling

**Module 6: Tools and Techniques for Bias Mitigation**

- Bias detection algorithms
- Fairness-aware optimization techniques
- Diverse data sampling and validation
- Sensitivity analysis for bias exposure
- Algorithmic debiasing strategies
- **Case Study:** Google Photos misclassification incident

**Module 7: Socio-Technical Perspectives**

- Intersectionality in AI outcomes
- Cultural context and local values in AI
- Gender, race, and class in AI models
- Community participation in AI design
- Power asymmetries in AI innovation
- **Case Study:** Gender bias in facial recognition systems

**Module 8: Responsible AI Communication**

- Framing and presenting research to public audiences
- Ethical storytelling in AI narratives
- Visualizations for transparency and fairness

- Building public trust in AI research
- Managing media relations and misinformation
- **Case Study:** OpenAI's release of GPT models and public engagement

**Training Methodology**

- Interactive expert-led lectures
- Hands-on labs and model audits
- Group discussions and policy analysis
- Guided critique of case studies
- Collaborative project-based learning
- Real-time feedback from facilitators

**Register as a group from 3 participants for a Discount**

**Send us an email: info@fineskilltrainingcenter.org or call** *+254769199797*

***Certification***

*Upon successful completion of this training, participants will be issued with a globally- recognized certificate.*

***Tailor-Made Course***

*We also offer tailor-made courses based on your needs.*

**Key Notes**

**a.** The participant must be conversant with English.

**b.** Upon completion of training the participant will be issued with an Authorized Training Certificate

**c.** Course duration is flexible and the contents can be modified to fit any number of days.

**d.** The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

**e.** One-year post-training support Consultation and Coaching provided after the course.

**f.** Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

## Upcoming Scheduled Sessions

| Start Date | End Date | Location | Price |
|---|---|---|---|
| **23 Nov 2026** | 27 Nov 2026 | Online | $1,000 |
| **23 Nov 2026** | 27 Nov 2026 | Physical | $1,500 |
| **23 Nov 2026** | 27 Nov 2026 | Physical | $3,000 |

| Start Date | End Date | Location | Price |
|---|---|---|---|
| **23 Nov 2026** | 27 Nov 2026 | Physical | $3,000 |
| **23 Nov 2026** | 27 Nov 2026 | Physical | $6,000 |
| **23 Nov 2026** | 27 Nov 2026 | Physical | $4,500 |
| **23 Nov 2026** | 27 Nov 2026 | Physical | $6,000 |
| **23 Nov 2026** | 27 Nov 2026 | Physical | $6,000 |

Ready to enroll or request a customized program? Book online or contact us:

**Register Online Now**

Email: info@fineskilltrainingcenter.com | Website: www.fineskilltrainingcenter.com