Predictive Process Monitoring in Research Workflows Training Course

Professional Development Training Course Outline

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

Course Introduction

In the evolving landscape of academic and applied research, addressing sensitive topics with methodological rigor and ethical precision is more critical than ever. This specialized training course explores innovative techniques for researching delicate subject matter—such as trauma, stigma, mental health, and social taboos—while maintaining credibility, confidentiality, and sensitivity. Predictive Process Monitoring in Research Workflows Training Course is combined with Predictive Process Monitoring (PPM) strategies to enhance transparency, quality assurance, and project foresight within complex research workflows. By integrating AI-powered tools, machine learning models, and data lifecycle optimization, this training bridges the gap between ethical inquiry and technological advancement.

Participants will gain practical skills to conduct ethical, high-impact research while proactively managing potential risks, ensuring compliance, and leveraging predictive analytics to monitor project execution. This course equips researchers, analysts, policy experts, and ethics officers with evidence-based strategies to ensure their studies are both insightful and responsible, positioning them for academic publication, funding opportunities, and policy influence.

Programme Curriculum

Predictive Process Monitoring in Research Workflows Training Course

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Course Objectives

1. Understand ethical frameworks for researching sensitive topics.
2. Apply trauma-informed and culturally responsive methodologies.
3. Integrate predictive process monitoring into research workflows.
4. Use machine learning to flag potential ethical risks and delays.
5. Implement data protection protocols for sensitive datasets.
6. Assess respondent vulnerability and psychological safety.
7. Design real-time monitoring dashboards for research progress.
8. Navigate IRB/ethics board approvals with confidence.
9. Use natural language processing (NLP) for qualitative sensitivity analysis.
10. Automate alert systems for workflow deviations.
11. Apply explainable AI (XAI) in ethical decision-making within studies.
12. Identify bias and mitigate it during predictive monitoring.
13. Co-create solutions with marginalized communities using participatory research.

Target Audiences

1. Academic researchers in social sciences and health.
2. Research ethics committee members.
3. NGO and humanitarian program evaluators.
4. Public health and policy analysts.
5. Data scientists in applied research.
6. PhD/Masters research students.
7. UX researchers handling user behavior data.
8. Monitoring and evaluation (M&E) professionals.

Course Duration: 5 days

Course Modules

Module 1: Introduction to Researching Sensitive Topics

- Define sensitive topics in interdisciplinary research.
- Identify ethical dilemmas and historical case precedents.
- Review confidentiality and data minimization principles.
- Analyze participant risk and emotional distress indicators.
- Learn ethical review board expectations.
- **Case Study**: Investigating gender-based violence in post-conflict zones.

Module 2: Trauma-Informed Research Practices

- Understand trauma's impact on participant data.
- Apply empathetic interviewing techniques.
- Recognize retraumatization signs during data collection.

- Build culturally sensitive research instruments.
- Ensure inclusive, non-triggering language.
- **Case Study**: Interviewing war survivors in longitudinal studies.

Module 3: Predictive Process Monitoring Fundamentals

- Define key concepts of PPM in research operations.
- Set up digital workflows with defined KPIs.
- Use log data for process mining.
- Integrate machine learning for predictive analysis.
- Identify early warning signals for workflow risks.
- **Case Study**: Predictive monitoring in a mental health study timeline.

Module 4: Data Governance and Protection for Sensitive Research

- Implement GDPR and IRB-compliant protocols.
- Apply data anonymization techniques.
- Secure cloud storage and access management.
- Track informed consent digitally.
- Develop breach response plans.
- **Case Study**: Handling personal narratives in domestic abuse research.

Module 5: Real-Time Workflow Visualization Tools

- Build interactive dashboards using Power BI/Tableau.
- Monitor time-based milestones and resource flow.
- Track ethical approval stages.
- Set up automated flags for deviation from protocols.
- Align dashboards with funder reporting needs.
- **Case Study**: Visualizing process flow in refugee field research.

Module 6: AI and NLP for Ethical Sensitivity Analysis

- Use NLP to detect linguistic bias and sensitive phrasing.
- Train models to flag emotionally charged content.
- Apply XAI models for ethical transparency.
- Conduct sentiment analysis on open-ended responses.
- Benchmark AI tools for ethical research enhancement.
- **Case Study**: Using NLP to assess suicide ideation risk in interviews.

Module 7: Participatory Approaches in Sensitive Topic Research

- Collaborate with communities to co-create tools.
- Foster transparency and mutual learning.
- Ensure benefit-sharing of research outcomes.
- Apply photovoice, storytelling, and lived experience narratives.
- Address power asymmetry in knowledge production.
- **Case Study**: Participatory mapping with survivors of urban violence.

Module 8: Evaluation, Compliance, and Adaptive Monitoring

- Use adaptive project management for sensitive timelines.
- Track compliance to ethical indicators.
- Conduct rolling evaluations during fieldwork.
- Incorporate feedback loops from participants and stakeholders.
- Adjust predictive models using iterative feedback.

- **Case Study**: Mid-study ethical audit of a sexual health intervention.

Training Methodology

- Interactive expert-led webinars and case discussions
- Scenario-based simulations with decision-making tools
- Real-time dashboards for group activities
- Group work for ethical scenario planning
- Hands-on sessions with AI/ML research tools
- Reflective learning journals for personal research contexts

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
23 Nov 2026	27 Nov 2026	Physical	$3,000

Start Date	End Date	Location	Price
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

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