Training Course on Artificial Intelligence for Student Performance Prediction

Professional Development Training Course Outline

Category	Educational Leadership and Management	**Duration**	10 Days
Base Fee	$3,000 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

In the era of data-driven education, Artificial Intelligence (AI) has emerged as a powerful tool to enhance learning outcomes, streamline administrative processes, and personalize student support. Training Course on Artificial Intelligence for Student Performance Prediction is designed to equip educators, administrators, and education technology specialists with in-demand skills to leverage machine learning, predictive analytics, and intelligent systems to forecast academic success and intervene effectively. With AI's capacity to process vast educational data, institutions can now identify at-risk students early, tailor instructional approaches, and elevate overall student achievement.

This hands-on, industry-relevant training blends AI theory, predictive modeling, educational data mining, and real-world applications to transform academic institutions. Participants will learn how to build and interpret AI models using student data, improve decision-making with intelligent dashboards, and ethically implement AI in education. By the end of this course, attendees will gain practical experience with tools like Python, TensorFlow, and Power BI, and be prepared to lead data-driven transformation in their organizations.

Programme Curriculum

Training Course on Artificial Intelligence for Student Performance Prediction

Introduction

In the era of data-driven education, Artificial Intelligence (AI) has emerged as a powerful tool to enhance learning outcomes, streamline administrative processes, and personalize student support. Training Course on Artificial Intelligence for Student Performance Prediction is designed to equip educators, administrators, and education technology specialists with in-demand skills to leverage machine learning, predictive analytics, and intelligent systems to forecast academic success and intervene effectively. With AI's capacity to process vast educational data, institutions can now identify at-risk students early, tailor instructional approaches, and elevate overall student achievement.

This hands-on, industry-relevant training blends AI theory, predictive modeling, educational data mining, and real-world applications to transform academic institutions. Participants will learn how to build and interpret AI models using student data, improve decision-making with intelligent dashboards, and ethically implement AI in education. By the end of this course, attendees will gain practical experience with tools like Python, TensorFlow, and Power BI, and be prepared to lead data-driven transformation in their organizations.

Course Objectives

1. Understand the fundamentals of AI in education and machine learning algorithms.
2. Analyze historical and real-time student performance data for predictive modeling.
3. Build AI models for academic success prediction using Python and TensorFlow.
4. Apply data visualization techniques to track student progress and insights.
5. Explore predictive analytics to identify and support at-risk learners.
6. Use learning analytics dashboards for informed educational decision-making.
7. Integrate AI-based early warning systems in school environments.
8. Evaluate the ethical and legal implications of AI in student monitoring.
9. Optimize student retention strategies with AI recommendations.
10. Enhance personalized learning through intelligent tutoring systems.
11. Conduct data preprocessing for cleaner, more accurate model predictions.
12. Leverage automated grading systems to reduce educator workload.
13. Develop an AI implementation roadmap tailored to institutional needs.

Target Audience

1. School Administrators
2. University Lecturers
3. Curriculum Developers
4. EdTech Entrepreneurs
5. Policy Makers in Education
6. Data Scientists in Education
7. Learning Analytics Researchers
8. IT Professionals in Academic Institutions

Course Duration: 10 days

Course Modules

Module 1: Introduction to AI in Education

- Definition and scope of AI in learning environments
- Key components of AI systems
- Overview of AI's impact on education
- Evolution of student performance tracking
- Benefits of predictive technologies
- **Case Study: AI transformation at Georgia State University**

Module 2: Basics of Predictive Analytics

- Fundamentals of predictive analytics
- Understanding the prediction lifecycle
- Types of prediction models
- Regression vs. classification
- Common tools and platforms
- **Case Study: Predicting dropout rates using logistic regression**

Module 3: Data Collection and Preprocessing

- Identifying relevant student data sources
- Cleaning and preparing datasets
- Handling missing or inconsistent data
- Data transformation techniques
- Feature engineering basics
- **Case Study: Data preprocessing pipeline in K-12 school system**

Module 4: Machine Learning Models for Prediction

- Supervised vs. unsupervised learning
- Building decision trees and neural networks
- Evaluating model accuracy
- Hyperparameter tuning
- Real-world datasets in education
- **Case Study: Neural network predicting math scores**

Module 5: Tools and Technologies for AI Development

- Introduction to Python and Jupyter Notebook
- Using TensorFlow and Scikit-learn
- Integrating Power BI for visualization
- Model deployment basics
- Collaborative coding tools (Git, Colab)
- **Case Study: End-to-end AI project in a community college**

Module 6: Student Performance Indicators

- Attendance, participation, and GPA
- Online learning behavior and engagement
- Socioeconomic factors and performance
- Learning disabilities and academic outcomes
- Real-time performance tracking
- **Case Study: AI-enhanced LMS identifying struggling students**

Module 7: Early Warning Systems

- Designing threshold models
- Alert mechanisms and notifications
- Data-driven intervention strategies
- Measuring effectiveness of warnings
- Customizing for diverse institutions
- **Case Study: Real-time alerts in South African schools**

Module 8: Personalization with AI

- Student profiling and adaptive learning
- Intelligent tutoring systems (ITS)
- AI in learning management systems
- Content recommendation engines
- Monitoring learning preferences
- **Case Study: Personalized e-learning at Arizona State University**

Module 9: Visualization of Predictive Outcomes

- Interactive dashboards

- Key performance indicators (KPIs)
- Heatmaps and score charts
- Tracking academic trends
- Communicating predictions effectively
- **Case Study: Power BI dashboard for university retention**

Module 10: AI-Driven Retention Strategies

- Predicting student attrition
- Proactive academic advising
- Resource allocation for support
- Evaluating retention model ROI
- Communication frameworks
- **Case Study: AI-led retention success at Ivy Tech**

Module 11: Ethical AI Use in Education

- Bias in data and algorithms
- Student privacy and FERPA compliance
- Transparency and accountability
- Responsible AI frameworks
- Building trust with stakeholders
- **Case Study: Legal implications of AI in New York schools**

Module 12: Integration with LMS Platforms

- AI plug-ins for Moodle, Canvas, Blackboard
- API connections and automation
- Real-time analytics in LMS
- Instructor and student dashboards
- LMS as a central data hub
- **Case Study: Moodle AI integration at University of Nairobi**

Module 13: Grading Automation Systems

- AI-based test scoring
- NLP for essay grading
- Feedback generation models
- Time-saving benefits
- Addressing grading fairness
- **Case Study: AI-automated grading in South Korea**

Module 14: Monitoring and Continuous Improvement

- Post-deployment monitoring
- Model retraining and updates
- Feedback loops from users
- Key performance review
- Scalability in larger systems
- **Case Study: Continuous model improvement at MITx**

Module 15: Building an AI Strategy for Schools

- Setting AI implementation goals
- Institutional AI readiness assessment
- Budgeting and funding sources

- Stakeholder engagement and training
- Measuring impact and scaling
- **Case Study: Developing an AI roadmap for NYC schools**

Training Methodology

- Interactive instructor-led sessions
- Hands-on labs using real student datasets
- Collaborative group projects
- Step-by-step coding walkthroughs
- Quizzes and mini assessments
- Capstone project with performance prediction dashboard

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	04 Dec 2026	Online	$2,000
23 Nov 2026	04 Dec 2026	Physical	$3,000
23 Nov 2026	04 Dec 2026	Physical	$6,000

Start Date	End Date	Location	Price
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$9,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$12,000

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

Register Online Now

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