



Artiq Insights

Solve problems at the root.
Build AI that works



Professional Certificate in Artificial Intelligence

LEARN
INNOVATE
LEAD



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MAKE AI WORK FOR YOU



Program Duration
9 Months



Program Format
Blended / Live online



Focus

- Statistical Foundations
- Python for Machine Learning and Artificial Intelligence
- Supervised and Unsupervised Models
- Deep Neural Networks, computer vision, and natural Language Processing
- Gen AI, LLMs and Agentic AI
- MLOps and data engineering



Unique Edge

Understand ML and AI at a deep level and develop skills to build sophisticated models and tools using state-of-the-art methods and frameworks.

**This program is
designed for
ambitious learners
who want to build
a strong and
enduring career in
AI**

IS THIS PROGRAM RIGHT FOR YOU?

- Working professionals in IT and allied fields looking to accelerate their career growth with real AI capabilities
- Professionals seeking a career transition to Data Science, Machine Learning or AI roles
- Recent graduates who aspire to enter the AI industry with practical skills and a portfolio that stands out
- Academics, researchers, engineers and entrepreneurs who want to strengthen their AI expertise and apply it to solve problems in their respective domains

**If you are ready to delve deep and build AI solution
for real impact, this program is built for you**

KEY HIGHLIGHTS



336 Hours of Expert-Led Training



Industry Relevant AI Projects and Capstone



Agentic AI Workflows



Insight and Impact Communication



End-to-End AI Skill Development



AI Engineering and Deployment Workflows



Portfolio that Speaks for You



Career Support



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KEY CONCEPTS AND SKILLS

- Coding in Python, Visualization in Excel, Tableau and Power BI
- Statistical analysis and inference, Linear and Logistic Regression, Model evaluation and diagnostics
- Time series forecasting, inclusion of external variables, Granger's causality, feature engineering
- Clustering and data mining
- Neural networks, Challenges and their resolution in optimizing a neural network
- Specialized architectures - CNN, RNN, LSTM
- Transformers, Pre-trained models, Prompt engineering
- RAG fundamentals, Multi agent system orchestration and management
- Version control, containerization and deployment using FASTAPI



LEARNING OUTCOMES

- Implement end-to-end AI pipelines using Python and essential ML tools and frameworks
- Present your findings and recommendations in a language that stakeholders can comprehend
- Apply appropriate statistical tests to validate hypotheses and support data driven decisions
- Design, train and evaluate linear and nonlinear models for regression and classification
- Implement suitable techniques to handle time series forecasting and predictive analytics
- Use data mining techniques to extract patterns and actionable insights from complex datasets
- Recruit and adapt pre-trained Generative AI models for tasks such as text summarization, classification and text automation
- Develop prompt-driven workflows and retrieval techniques to enhance model relevance in realistic applications
- Build, orchestrate and and deploy AI agents for executing goal directed complex tasks



PROGRAM OVERVIEW

What you will learn

Across nine months of immersive learning, you will build strong expertise in

Foundations of Data and AI

- ✓ Python for data analysis and AI development
- ✓ Statistical reasoning and experimentation
- ✓ Data preprocessing, feature engineering, visualization

Machine Learning

- ✓ Supervised learning: Regression and classification
- ✓ Unsupervised learning, clustering and data mining
- ✓ Model tuning, performance evaluation and optimization

Time Series and Predictive Analytics

- ✓ Forecasting techniques and trend analysis
- ✓ Real-world predictive business applications



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PROGRAM OVERVIEW

Deep Learning

- ✓ Neural network architectures and training
- ✓ Computer Vision and Natural Language Processing
- ✓ Deployment considerations and engineering workflows

Generative AI

- ✓ Transformers and Pretrained LLMs
- ✓ Prompt engineering

Agentic AI

- ✓ ReAct based reasoning workflows
- ✓ Tool integration for autonomous execution
- ✓ Retrieval-Augmented Generation (RAG) with evaluation
- ✓ Memory-enabled conversational agents
- ✓ Deploying and managing agents for performance and reliability

* For the full list of topics covered and skills developed, please visit www.artiqinsights.com/PCAI.



PROOF OF MASTERY

When you graduate, you won't just know AI; you will have proof of your capabilities through a portfolio that demonstrates how you apply theory, engineering and problem understanding to deliver AI solutions that will work in the real world:

- **5+ guided projects** applying ML, Deep Learning and Generative AI
- **Industry-aligned capstone project** including Agentic AI solutions demonstrating reasoning and tool-use capabilities
- Professional **GitHub** repository with clear code and documentation
- **Impactful presentation** that shows clarity, value and decision influence



CONTACT US



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