



Empower Yourself With Quantum & AI

Pave Way to Drive
Innovation with QpiAI



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A step in the **Right Direction**

\$125 Billion

Estimated Quantum Computing Market Size by 2030

Source: GlobalNewsWire

30000+ Jobs

Globally in Quantum Computing by 2026

Source: Wiley-VCH

48K Crore

The Indian AI market Valuation as of August 2025.

Source: Analytics India Magazine

40%

of Global Organizations are adding more jobs due to AI adoption.

Source: Dun & Bradstreet



Course Overview

Discover Quantum & AI from the fundamentals and advance your way through Artificial Intelligence algorithms, Machine Learning techniques and Quantum programs. Gain strong foundational technical knowledge and write, build, test, train and deploy AI/ML/Quantum solutions. Throughout the course, you will be introduced to real-world problems and applications to prepare you for what the future holds.

Learning Experience



Industry Perspective

Taught by Industry leaders and professors



Assignments & Projects

Guided learning and Implementation



100% Online

Theory & Practical



Live Interactions

Doubt clearing with 1:1 mentorship

Why **Learn** With US?

Access India's **Most Advanced Quantum Simulator**

QpiAI Explorer is an online learning tool that outstandingly combines the power of AI & Quantum within the same platform. It helps you learn, prepare, generate and predict AI/ML models along with simulating Advanced Quantum Circuits.



Secure a Certificate from **QpiAI**

Master Quantum & AI Technology with experts QpiAI leaders and secure a value added certification for your resume to boost your career credentials.

Transform your certification into income!

Build AI models and Quantum Solutions using the skills you've learned, then connect with enterprises and sell your solutions directly on the Marketplace. Your knowledge becomes your competitive advantage.



Accelerate your career with

In(dustry – Depth) Curriculum

Agentic AI

 High Demand

Master Generative AI, RAG, and agentic frameworks through hands-on projects and 1:1 mentorship.

Chapter 1: Orientation

- 1.1 Introduction to Agentic AI: real-world applications and industry impact
- 1.2 Essential tools and frameworks, including Python, LangChain, LlamaIndex, and Agent Hive
- 1.3 Environment setup with cloud notebooks, APIs, and development configuration
- 1.4 Pre-requisites, Basic AI/ML Concepts (Machine Learning, Neural Networks, NLP)

Chapter 2: NLP & LLM Fundamentals

- 2.1 Core NLP concepts: embeddings, transformers, and attention mechanisms
- 2.2 Large Language Models: architecture, capabilities, and limitations
- 2.3 Building foundations for RAG and agentic systems

Chapter 3: Prompt Engineering

- 3.1 Prompt design strategies and optimization techniques
- 3.2 Chain-of-thought reasoning for complex problem-solving
- 3.3 Context engineering and advanced query methods for enhanced accuracy

Chapter 4: Retrieval-Augmented Generation (RAG)

- 4.1 Building intelligent retrieval systems with embeddingbased search
- 4.2 RAG architecture: document processing, retrieval, and LLM integration
- 4.3 Visual RAG for multimodal applications combining image and text



Course Duration
6 Months



Course Fee
INR 79,999

Chapter 5: Fundamentals of Agentic AI

- 5.1 Understanding agents, LLMs, and agentic design paradigms
- 5.2 Workflow patterns: autonomy, goal direction, and orchestration strategies
- 5.3 Tool integration, memory systems, feedback loops, and reasoning mechanisms

Chapter 6: Advanced Agentic AI

- 6.1 Re React framework: combining reasoning with action execution
- 6.2 Multi-agent systems with collaboration and coordination patterns
- 6.3 Production deployment using LangChain, CrewAI, AgnoAGI, and Agent Hive

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 High Demand

Agentic AI with Agent Hive

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Course Duration
6 Months



Agent Hive Tool Access
6 Months



Course Fee
INR 1,49,999

Chapter 6: Advanced Agentic AI

- 6.1 Re React framework: combining reasoning with action execution
- 6.2 Multi-agent systems with collaboration and coordination patterns
- 6.3 Production deployment using LangChain, CrewAI, AgnoAGI, and Agent Hive

Bonus: Agent Hive Tool Access

Agent Hive is a unified platform for building, orchestrating, and deploying AI agents. With an intuitive visual interface, it enables teams to design workflows, explore multi-step reasoning, and rapidly turn ideas into real AI-driven applications—without deep technical expertise.



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AI Foundation

Dip your toes in the field of AI

Chapter 1: Prerequisites for Artificial Intelligence

- 1.1 Linear Algebra
- 1.2 Probability Theory, Bayes Theorem and Statistics
- 1.3 Calculus and Optimization

Chapter 2: Machine Learning

Supervised Machine Learning:

- 2.1 Introduction to Machine Learning, Supervised and Unsupervised techniques
- 2.2 Linear and Multiple Linear Regression, Performance Metrics, Regularization
- 2.3 Classification Models: KNN, Logistic Regression
- 2.4 Support Vector Machines; Classification Performance Metrics
- 2.5 Decision Trees, Bagging, Boosting and Ensemble Algorithms

Unsupervised Machine Learning:

- 2.6 Dimensionality Reduction: PCA
- 2.7 Clustering: K-Means Clustering

Chapter 3: Deep Learning

- 3.1 Introduction to Deep Learning, Activation Functions, Feedforward Network
- 3.2 Back Propagation, Loss Functions, Hyperparameter Tuning
- 3.3 Convolutional Neural Networks (CNN)
- 3.4 CNN Architectures for Image Classification
- 3.5 Recurrent Neural Networks
- 3.6 Long Short-Term Memory Models
- 3.7 Autoencoders



Course Duration
3 Months



Explorer Access
6 Months



Course Fee
INR 99,999

Chapter 4: Reinforcement Learning

- 4.1 Introduction to Reinforcement Learning and Multi Armed Bandits
- 4.2 Markov Decision Processes
- 4.3 Dynamic Programming (Value and Policy Iteration)
- 4.4 Monte-Carlo Methods (On-policy and Off-Policy Algorithms)

Bonus: Practical Hands-on Session

- 5.1 Machine Learning model generation with scikit-learn
- 5.2 Deep Learning model generation with PyTorch

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AI Expert

Dive Deep into AI & ML

All Chapters in AI Foundation+

Chapter 5: Special Topics in Machine Learning

5.1 Dimensionality Reduction: t-SNE, Kernel PCA, Spectral Clustering

5.2 Exploratory Data Analysis

5.3 Feature Engineering, Hyperparameter Tuning, Model Selection

Chapter 6: Advanced Topics in Deep Learning

6.1 Object Detection

6.2 Semantic Segmentation

6.3 Generative Adversarial Networks

6.4 Variational Autoencoders

Chapter 7: Advanced Reinforcement Learning

7.1 Q-learning, Temporal Difference Methods

7.2 Function Approximation, DQN

7.3 Policy Gradient Techniques and Actor Critic Methods

Chapter 8: Bayesian Methods in Machine Learning

8.1 Bayesian Inference

8.2 Bayesian Optimization

8.3 Variational Methods

8.4 Gaussian Process Regression

Bonus: Practical Hands-on Session

9.1 Machine Learning model generation with scikit-learn

9.2 Deep Learning model generation with PyTorch

9.3 Reinforcement Learning agent training in OpenAI Gym



Course Duration

6 Months



Explorer Access

12 Months



Course Fee

INR 2,22,999



Let's set you up for success?

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AI Pro

Become the AI Grandmaster AI Expert + Access to industry Standard Auto ML Platform

All Chapters in AI Expert

Chapter 5: Special Topics in Machine Learning

- 5.1 Dimensionality Reduction: t-SNE, Kernel PCA, Spectral Clustering
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Course Duration
6 Months



Explorer Access
12 Months



Course Fee
INR 2,99,999

1 Lakh Worth of Credits with Software Access.

QpiAI™ Pro is described as a collaborative way to ideate ML & AI models for futuristic innovations.

10.1 Model discovery using Pro

10.2 Model generation and Automl

10.3 Model deployment on edge devices and cloud

10.4 End to End Project 1 with 48 hrs of cloud usage (Student can choose project)

10.5 End to End Project 2 with 96 hrs of cloud usage (Student can choose project)

10.6 End to End Project 3 with 198 hrs of cloud usage (Student can choose project)

Quantum Foundation with Amazon Braket

Dip toes in the field of Quantum

Chapter 1: Prerequisites for Quantum Computing

- 1.1 Essential Linear Algebra
- 1.2 Basics of Quantum Mechanics
- 1.3 General Lecture on Quantum Technology
- 1.4 Essential Computer Science

Chapter 2: Quantum States and Qubits

- 2.1 Single-qubit states and superposition
- 2.2 Single-qubit gates and measurements
- 2.3 Two-qubit states, entanglement, and Bell's inequality
- 2.4 Two-qubit gates and observable
- 2.5 Multi-Qubit states (GHZ and W states)
- 2.6 Universal gates and quantum circuit model
- 2.7 Quantum adiabatic computation and the Ising model

Chapter 3: Quantum Algorithms

- 3.1 Quantum Circuits
- 3.2 Deutsch-Jozsa Algorithm
- 3.3 Bernstein-Vazirani Algorithm
- 3.4 Quantum Fourier Transform
- 3.5 Quantum Factoring: Shor's Algorithm
- 3.6 Quantum Database Search: Grover's Algorithm
- 3.7 Circuit Simulations on QpiAI Explorer Software

Chapter 4: Quantum Protocols

- 4.1 Quantum Teleportation
- 4.2 Superdense Coding
- 4.3 Simulation of QpiAI Explorer Software
- 4.4 Quantum Cryptography and Key Distribution
- 4.5 Quantum Communication and Networks



Course Duration
3 Months



Explorer Access
6 Months



Course Fee
INR 1,19,999

Chapter 5: Quantum Hardware: Superconducting Qubits

- 5.1 Introduction to physical qubits
- 5.2 Circuit Quantum Electrodynamics
- 5.3 Transmon and Coupled Qubits
- 5.4 Control and Readout

Let's set you up for success?

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 High Demand

Quantum Expert with Amazon Braket

Dive deep into Quantum

All Chapters in Quantum Foundation+

Chapter 6: NISQ Devices

- 6.1 Noise Models
- 6.2 Quantum Error Mitigation
- 6.3 Quantum Volume and Performance Metrics
- 6.4 Hybrid Quantum-Classical Computing

Chapter 7: Quantum Algorithms for Applications

- 7.1 Quantum Inspired Computing
- 7.2 Variational Quantum Algorithms
- 7.3 Variational Quantum Eigensolver
- 7.4 Quantum Approximate Optimization Algorithm
- 7.5 Quantum Machine Learning: QNNs
- 7.6 HHL Algorithm for Solving Linear Systems

Chapter 8: Quantum Hardware: Semiconducting Qubits

- 8.1 Introduction to physical qubits
- 8.2 Spin Physics and Quantum Dots
- 8.3 Control and Readout
- 8.4 Scalability



Course Duration
6 Months



Explorer Access
12 Months



Course Fee
INR 1,49,999

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Joint AI & Quantum Expert with Amazon Braket

Become the AI & Quantum Grandmaster

All Chapters in AI Expert+

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- 4.6 Guest Lecture – QKD, Communications

Chapter 5: NISQ Devices

- 5.1 Noise Models



Course Duration
6 Months



Explorer Access
12 Months



Course Fee
INR 2,62,999

- 5.2 Quantum Error Mitigation
- 5.3 Quantum Volume and Performance Metrics
- 5.4 Hybrid Quantum-Classical Computing

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Course Duration
3 Months



Explorer Access
6 Months



Course Fee
INR 99,999

Chapter 4: Quantum Protocols

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Quantum Expert

Dive deep into Quantum

All Chapters in Quantum Foundation+

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Course Duration
6 Months



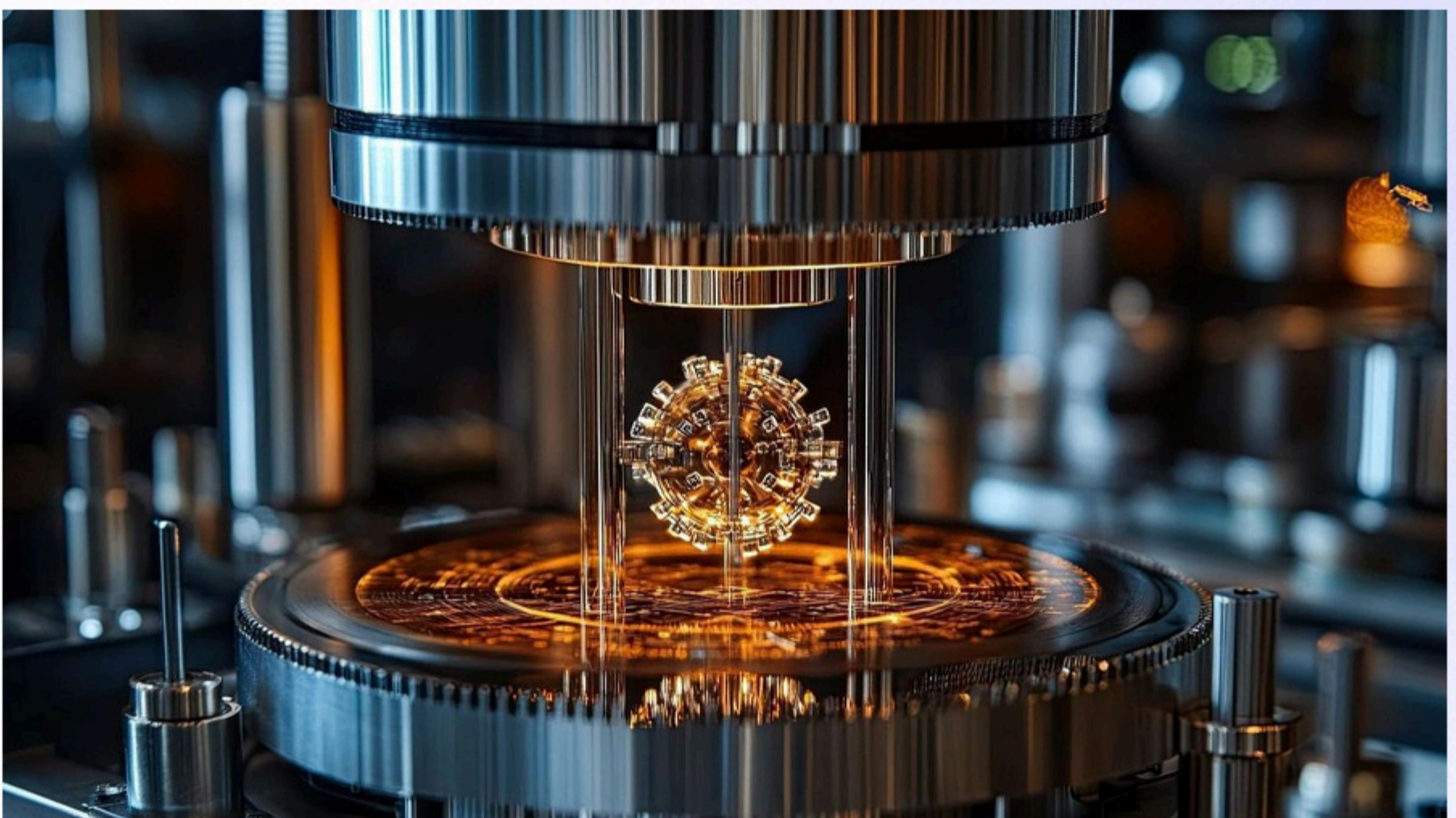
Explorer Access
12 Months



Course Fee
INR 1,29,999

Chapter 8: Quantum Hardware: Semiconducting Qubits

- 8.1 Introduction to physical qubits
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Joint AI & Quantum Expert

Become the AI & Quantum Grandmaster

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Chapter 5: NISQ Devices

- 5.1 Noise Models



Course Duration
6 Months



Explorer Access
12 Months



Course Fee
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- 5.2 Quantum Error Mitigation
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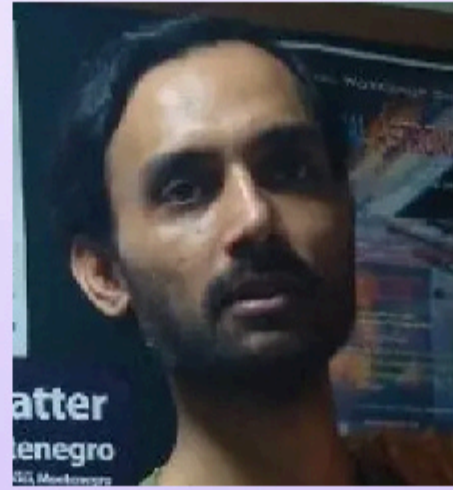
Learn In-Demand Skills From Global Leaders



Dr. Nagendra Nagaraja

CEO & Founder, QpiAI India.

PhD, Coventry University UK.



Prof. Ujjwal Sen

Professor, Quantum Information
& Computation Group.

Harish-Chandra Research Institute, Allahabad.

Optimal Balance of Academic Excellence and Industry Expertise



Lakshya Priyadarshi

Senior Director, Quantum Software,
QpiAI India.
B.Tech, IIIT.



Aswanth Krishnan

VP, Software Products,
QpiAI India.
MSc, NIT Karnataka.



Sachin Kumar

VP, AI Engineering,
QpiAI India.
B.Tech, NIT Trichy.



Dr. Amlan Mukherjee

Principal Scientist,
QpiAI India.
PhD



Dr. Arpit Jain

Director of AI Projects & Education,
QpiAI India.
PhD



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All set to get AI and Quantum ready?

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