QUANTUM FUTURE UNIVERSITY

Data Analytics with Agentic AI & Gen AI

The Power of AI Generalists Programme for Working Professionals Automation

A flexible, 250+ hour career-accelerator track built around a working professional's schedule — from Excel and SQL foundations to Business Intelligence, Applied Statistics, Machine Learning, Generative AI and Agentic Automation.

250+	3+	20+	100%
HOURS OF TRAINING	CAPSTONE PROJECTS	TOOLS & STACK	PRACTICAL, APPLIED AI

Designed for evening & weekend cohorts • Self-paced options available • Live mentor office hours

INSTITUTIONAL OVERVIEW

About Quantum Future University

QFU & AI Excellence LLP operates Quantum Future University, an industry-focused AI Innovation Institute committed to delivering practical, career-oriented education for working professionals who need to upskill without pausing their careers.

Our Educational Philosophy

We bridge the gap between academic theory and enterprise execution through immersive, project-driven learning. The program prepares professionals to tackle real business challenges using modern data tools and modern AI frameworks — on a schedule that fits around a full-time job.

End-to-End Expertise

The curriculum spans the full technical spectrum: starting with Excel and SQL foundations, progressing through Business Intelligence and Applied Statistics, and culminating in Python-driven Machine Learning, Generative AI and Agentic AI automation.

Built for Working Professionals

- Live evening and weekend cohorts, plus a self-paced track for shift-based schedules.
- Recorded sessions and async mentor support so no live class is a hard blocker.
- Workload calibrated to roughly 6-8 hours a week alongside a full-time job.
- Cohort peer groups drawn from working analysts, engineers and business professionals.

INSTITUTIONAL STRENGTHS

Why Choose This Program

01 Industry-Recognized Assessment
• Certification benchmarked directly against global technology standards used by hiring teams.

02 International Academic Collaboration
• Curriculum continuously updated alongside global academic and industry experts.

03 Practical, Project-Based Learning
• Every module anchors to a hands-on portfolio deliverable, not theoretical lectures alone.

04 Enterprise-Grade Toolstack
• Direct experience with the exact technology stack enterprise data & AI teams deploy in production.

05 Portfolio & Career Development
• Structured career support turning coursework into hiring-ready, public GitHub repositories.

06 Global Mentor Faculty
• Trainers who combine academic rigor with real enterprise data & AI deployment experience.

INDUSTRY DEMAND

Why Data Analytics & AI, Now

The global technology landscape is undergoing a permanent structural shift toward data-driven, AI-augmented operations — and working professionals who can bridge both worlds are the ones being promoted into it.

The AI & Analytics Transformation Wave

- **Data-Driven Decision Making**: organizations worldwide are embedding analytics and AI into everyday business decisions.
- **Business Intelligence at Scale**: interactive dashboards and self-service BI are becoming the default way leadership tracks performance.
- **Agentic Workflow Automation**: AI agents are rapidly taking over multi-step reporting and operational workflows.
- **Global Talent Shortage**: rising enterprise demand for professionals who combine data fluency, BI tooling and applied Gen AI skills.

The Career Opportunity

Professionals who can move fluidly from spreadsheet and SQL analysis to BI dashboards, Machine Learning and Agentic AI automation sit at the center of modern, high-value hiring — exactly the range this program is designed to build.

CURRICULUM TRACK 1 · MODULES 1&NDASH;2

Core Analytics & Data Engineering

MODULE 01 Advanced Excel for Data Analysis

- Excel Fundamentals: advanced formulas (XLOOKUP, INDEX-MATCH, SUMIFS, Dynamic Arrays).
- Data Wrangling: Power Query for extraction, transformation & automated cleaning pipelines.
- Data Modeling & Pivot Tables: calculated fields, relationships, multi-table pivots, slicers.
- Interactive Dashboards: executive dashboards, conditional-formatting KPI cards, dynamic charts.

MODULE 02 SQL & Relational Databases

- Database Concepts: RDBMS architecture, primary/foreign keys, normalization.
- Querying Data: SELECT, WHERE, GROUP BY, HAVING, ORDER BY, CASE WHEN.
- Advanced SQL: joins (inner, left, right, full outer), subqueries, CTEs.
- Window Functions: ROW_NUMBER, RANK, DENSE_RANK, LEAD, LAG, running aggregates.
- Database Manipulation: INSERT, UPDATE, DELETE, CREATE, ALTER.

CURRICULUM TRACK 2 · MODULES 3&NDASH;4

Data Visualization & Programming

MODULE 03 Business Intelligence with Power BI

- Data Connection & Transformation: SQL/Excel import, Power Query, M-code basics.
- Data Modeling: star schema, snowflake schema, active vs. inactive relationships.
- DAX Foundations: CALCULATE, FILTER, ALL, time-intelligence functions (YTD, SPLY).
- Visual Storytelling: custom tooltips, bookmarks, drill-through, mobile views.
- Power BI Service: publishing, scheduled refreshes, row-level security, workspaces.

MODULE 04 Applied Statistics & Probability

- Descriptive Statistics: central tendency, dispersion, skewness, kurtosis, outliers.
- Probability Foundations: conditional probability, Bayes' Theorem, distributions.
- Inferential Statistics: hypothesis testing, p-values, Z/t-tests, ANOVA, Chi-Square.
- Statistical Thinking for Business: A/B testing design, confidence intervals, sample size.

CURRICULUM TRACK 3 · MODULES 5&NDASH;6

Python Programming & Machine Learning

MODULE 05 Python for Data Science

• Python Basics: data types, control structures, functions, OOP basics.
• Numerical & Data Processing: NumPy arrays, Pandas DataFrames, indexing, filtering, grouping.
• Exploratory Data Analysis: Matplotlib & Seaborn - heatmaps, boxplots, pairplots.
• API Handling: HTTP requests, JSON parsing, loading live web data.

MODULE 06 Fundamentals of Machine Learning & NLP

• ML Workflow: train-test split, cross-validation, feature engineering & scaling.
• Supervised Learning: Linear/Ridge/Lasso regression; Logistic Regression, Decision Trees, Random Forest, XGBoost.
• Unsupervised Learning: K-Means Clustering, Hierarchical Clustering, PCA.
• Basic NLP: tokenization, lemmatization, stopwords, Bag of Words, TF-IDF, sentiment analysis.

CURRICULUM TRACK 4 · MODULES 7&NDASH;8

Generative AI & Prompt Engineering

MODULE 07 Foundations of Generative AI & LLMs

- Intro to Gen AI: generative vs. discriminative models, Transformers & attention mechanisms.
- Large Language Models: architecture overview, tokenization, context windows, temperature, Top-P.
- Exploring Frontier Models: Claude (Anthropic), ChatGPT/GPT-4o (OpenAI), Gemini (Google).

MODULE 08 Masterclass in Prompt Engineering

- Core Prompting Techniques: zero-shot, few-shot, Chain-of-Thought (CoT) prompting.
- Prompt Roles: system prompts vs. user prompts vs. assistant messages.
- Advanced Strategies: ReAct framework, role-playing, structured output (JSON/Markdown/YAML), guardrailing.
- Claude-Specific Mastery: Artifacts usage, XML tags, system prompts, context-window optimization.

CURRICULUM TRACK 5 · AI GENERALIST MODULES 9&NDASH;10

Agentic AI & Workflow Automation

MODULE 09 AI Automation with n8n (No-Code / Low-Code)

- n8n Foundations: nodes, triggers (webhooks, schedules), actions, data payload structures.
- Connecting Systems: API integrations with Google Sheets, Slack, Email, PostgreSQL, CRM systems.
- Building AI Workflows: LLM nodes (OpenAI/Anthropic), custom memory, JSON parsing, dynamic routing.
- Production & Deployment: error handling, webhooks, sub-workflows, self-hosting options.

MODULE 10 Agentic AI Foundations

- Autonomous AI Agents: standard workflows vs. goal-oriented autonomous agents.
- Agent Core Components: planning, short/long-term memory, tool use & function calling, execution.
- Multi-Agent Systems in n8n: chaining specialized agents - extraction, analysis, report generation.
- RAG Basics: embeddings, vector databases, querying internal knowledge bases via agents.

TECHNOLOGY ECOSYSTEM

Tools & Technical Stack

Master the complete enterprise technology stack used by leading data and AI teams.

Spreadsheets & BI	Excel, Power Query, Power BI, DAX
Databases & Engineering	SQL, PostgreSQL, M-code
Python & Data Science	Python, NumPy, Pandas, Matplotlib, Seaborn
Machine Learning	Scikit-Learn, XGBoost, Random Forest, PCA, K-Means
Generative AI & LLMs	Claude, ChatGPT / GPT-4o, Gemini
Automation & Agentic AI	n8n, Webhooks, Vector Databases, Slack, Google Sheets

PRACTICAL PORTFOLIO

Applied Capstone Projects

Build real-world proof-of-work projects to demonstrate technical capability to potential employers.

ANALYTICS ENGINEERING · 1 Automated Analytics Pipeline

• Extract business data via SQL, process and transform it using Python, and publish an interactive, decision-ready dashboard in Power BI.

AGENTIC AUTOMATION · 2 AI-Powered Customer Feedback & Sentiment Agent

• Build an n8n workflow that pulls customer reviews, passes them to Claude for sentiment and topic tagging, updates a database, and sends a summary alert to Slack.

AI GENERALIST CAPSTONE · 3 End-to-End Autonomous Data Analyst Agent

• Construct an agentic workflow in n8n that reads raw CSV/database files, runs automated exploratory data analysis, uses Claude for natural-language insight generation, and posts an executive summary to stakeholders.

CAREER ADVANCEMENT

Outcomes & Dual Certification

Target Job Roles

- Modern Data Analyst
- AI Automation Specialist
- Analytics Engineer
- AI Generalist / BI Developer

High-Demand Target Sectors

- Technology Platforms
- FinTech & Financial Services
- E-Commerce & Retail
- Healthcare
- Management Consulting
- Global Enterprises

Dual Certification Advantage

Independent Assessment Certification

• Awarded upon successfully passing an independently administered technical assessment.

QFU Certificate of Completion

• Official credential issued by Quantum Future University upon fulfilling all core modules and capstone project requirements.

EXPERT MENTORSHIP

Faculty & Industry Mentors

STRATEGY & INSTITUTIONAL LEADERSHIP **Program Director**

• Two decades-plus of experience driving technological innovation and strategic transformation, with credentials across project and process excellence.

CURRICULUM & TECHNICAL ARCHITECTURE **Head of Data & AI Engineering**

• Over 10 years of global software engineering and enterprise corporate training practice, focused on applied innovation.

APPLIED DATA SCIENCE & ESG ANALYTICS **Innovation Strategist**

• A data scientist with 20+ years of operational insight, pioneering narrative-intelligence approaches to unstructured, predictive analytics.

LEARNER ENABLEMENT & MENTORSHIP **Lead Analytics Trainer**

• Has mentored thousands of practitioners worldwide, bridging theoretical frameworks with hands-on practice.

ENROLLMENT & SUPPORT

Career Support & Contact

Dedicated Career Services

- **1:1 Mentorship Sessions**: tailored project reviews and personalized career roadmaps.
- **Resume & LinkedIn Optimization**: positioning your profile for high-tier data & AI roles.
- **Mock Technical Interviews**: realistic, domain-based preparation and coding challenges.
- **Job Referral Network**: direct connections to partner enterprise hiring networks.

Global Corporate Offices

Corporate Office – America	Corporate Office – Delhi NCR
One World Trade Center, 85th Floor Lower Manhattan, New York, NY 10007, USA	Dwarka Sector 17, Plot No. 61 Indraprastha Society, New Delhi – 110075, India

Website: quantumfutureuniversity.com | **Email:** admissions@quantumfutureuniversity.com
Business Hours: Mon – Sat, 10:00 AM – 7:00 PM IST (evening & weekend live sessions scheduled for working professionals)