MASTER DATA ENGINEERING WITH AI
COURSE With Placement

Learn to Build Real-World Data Pipelines with Real-Time Hands-on Data Engineering Projects & Get Placed in Top Companies

16+ Hours	500+ Learners	250 Jobs	250 Companies

Powered by **iNVENTIERS** PRIME Data Engineering CERTIFICATION

Course Cost **STARTS HERE !**

ARE YOU FACING THESE CHALLENGES ?

- Not sure if your Data Engineering skills are industry-ready
- Struggling to find real-world projects to showcase your skills
- Don't know what's next after completing the basics
- Lack confidence in cracking Data Engineering interviews
- Not getting interview calls despite applying to multiple companies

Power Essentials Helps You

ABOUT INVENTATEQ

Inventateq is a leading edtech company dedicated to empowering professionals and students by providing industry-driven training and career support.

Our Mission

To bridge the gap between academic learning and real-world industry requirements by delivering practical, hands-on training that prepares learners for successful careers in technology.

Our Vision

To become a trusted global leader in skill development, enabling individuals to unlock their full potential and thrive in the ever-evolving digital landscape.

Why Thousands Choose Inventateq?

5★	10+	500+	15,000+
Rated	Years	Hiring Partners	Students Trained

We Collaborate With

Deloitte. Cognizant ARMOR ACCEL

WHY LEARN DATA ENGINEERING WITH AI ?

Data Engineering is the backbone of modern AI and analytics. Companies need skilled professionals who can build, manage, and optimize data pipelines — and AI is making these roles more powerful than ever.

LEARN IN DEPTH AT INVENTIERS WITH AI

- Python Mastery Complemented
- SQL Mastery Complemented
- Data Warehousing & Modeling
- Data Lake Architecture Essentials
- Cloud Platforms Essentials
- Big Data Processing Complemented
- Workflow Orchestration
- Real-time Data Engineering

Live, Practical Sessions | Industry-Expert Mentors | Industry Collaboration

₹7.5 L/PA. - ₹24 L/PA

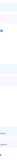
WHY INVENTIATEQ ?

Inventateq is a leading edtech company dedicated to empowering professionals and students by providing industry-driven training and career support.

STUDENT TESTIMONIALS

- Hands-on Training
- Personalized Learning Paths
- Live Interactive Sessions
- Resume & Profile Optimization
- Mock Interviews & Assessments
- Industry Networking & Job Referrals

LEARN FROM TOP EXPERTS



OUR PLACEMENT STATS

95.3000+	5000+	500+	91.4%
Alumni Network	Hiring Partners	Mock Interviews	Placement Assistance

1:1 Career Guidance Programme

GUARANTEED PLACEMENT SUPPORT

Our dedicated placement team ensures you're job-ready and connected to the right opportunities.

- Resume Building
- Personal Branding
- Mock Interviews
- Referral Network
- Resume Shortlisting
- Interview Scheduling
- Job Referrals
- Offer Negotiation

EARLY PLACEMENT STARTERS

OUR PLACEMENT STATS

95.3000+	5000+	500+	91.4%
Alumni Network	Hiring Partners	Mock Interviews	Placement Assistance

1:1 Career Guidance Programme

CAREER PROGRESSION

Explore how Data Engineering can transform your career, using industry-standard certifications.

Starting Role	Mid-Level Role	Senior Role
Data Engineering Associate	Responsible for designing and building scalable data pipelines, ensuring data quality, and optimizing data workflows.	Leads the development of complex data engineering solutions, mentors junior engineers, and drives innovation in data architecture.
Data Engineering Analyst	Analyzes business requirements and translates them into technical specifications for data engineering projects.	Provides strategic insights and recommendations to stakeholders, leveraging data engineering expertise to drive business decisions.
Cognitive Computing Engineer	Develops and implements cognitive computing models, leveraging machine learning and natural language processing techniques.	Leads the development of cognitive computing strategies, collaborates with cross-functional teams, and drives innovation in AI-powered solutions.
Machine Learning Engineer	Develops and deploys machine learning models, collaborates with data scientists, and optimizes model performance.	Leads the development of machine learning strategies, mentors junior engineers, and drives innovation in AI-powered solutions.

SKILLS ROADMAP

Explore how Data Engineering can transform your career, using industry-standard certifications.

Starting Role	Mid-Level Role	Senior Role
Machine Learning Engineer	Develops and deploys machine learning models, collaborates with data scientists, and optimizes model performance.	Leads the development of machine learning strategies, mentors junior engineers, and drives innovation in AI-powered solutions.
Data Engineering Analyst	Analyzes business requirements and translates them into technical specifications for data engineering projects.	Provides strategic insights and recommendations to stakeholders, leveraging data engineering expertise to drive business decisions.
Cognitive Computing Engineer	Develops and implements cognitive computing models, leveraging machine learning and natural language processing techniques.	Leads the development of cognitive computing strategies, collaborates with cross-functional teams, and drives innovation in AI-powered solutions.
Machine Learning Engineer	Develops and deploys machine learning models, collaborates with data scientists, and optimizes model performance.	Leads the development of machine learning strategies, mentors junior engineers, and drives innovation in AI-powered solutions.

DETAILED MODULE PLAN

MODULE 1 – Data Engineering Fundamentals

- Introduction to Data Engineering
- Roles & Responsibilities of a Data Engineer
- Data Engineering Lifecycle & Workflows
- Structured vs Unstructured Data
- Batch vs Real-time Processing
- ETL vs ELT
- Data Quality & Understanding
- Data Governance & Security Basics
- Introduction to Cloud Platforms

▶ Interview Questions

MODULE 2 – Python for Data Engineering

- Python Fundamentals
- Data Structures for Data Engineering
- Functions, Modules & Error Handling
- Functions
- File Handling
- Working with APIs
- Web Scraping
- Introduction to Pandas

▶ Interview Questions

MODULE 3 – Advanced SQL & Database Engineering

- Recap of Basic SQL
- Joins, Subqueries & Window Functions
- CTEs
- Views & Materialized Views
- Stored Procedures & Functions
- Triggers
- Query Optimization & Performance Tuning
- Indexing Strategies

▶ Interview Questions

MODULE 4 – Data Warehousing & Data Modeling

- Data Warehouse Architecture
- OLTP vs OLAP
- Star Schema
- Snowflake Schema
- Fact Tables
- Dimension Tables
- Slowly Changing Dimensions (SCD)
- Data Modeling Best Practices

▶ Interview Questions

MODULE 5 – ETL / ELT & Data Pipeline Development

- ETL Architecture
- Data Extraction
- Transformation Logic
- Data Loading Strategies
- Incremental Loading
- Full Load
- Error Handling & Logging

▶ Interview Questions

MODULE 6 – Big Data & Apache Spark

- Big Data Fundamentals
- Hadoop Ecosystem Overview
- Apache Spark Architecture
- Spark DataFrames & SQL
- Data Lakehouse
- Spark Optimization Techniques
- Working with Large Datasets

▶ Interview Questions

MODULE 7 – Databricks, Delta Lake & Lakehouse

- Databricks Platform
- Delta Lake Architecture
- Delta Lake
- Medallion Architecture
- Unity Catalog
- Databricks Workflows
- Notebooks & Jobs

▶ Interview Questions

MODULE 8 – Apache Airflow & Workflow Orchestration

- Workflow Orchestration
- Airflow Architecture
- DAGs
- Operators
- Scheduling
- Monitoring
- Retries & Alerts

▶ Interview Questions

MODULE 9 – Cloud Data Engineering

- Cloud Fundamentals
- AWS / Azure / GCP Overview
- Cloud Storage
- Cloud Data Warehouses
- Serverless Computing
- Networking & Security Basics
- Cost Optimization

▶ Interview Questions

MODULE 10 – Real-Time Data Engineering & Streaming

- Batch vs Streaming
- Streaming Architectures
- Apache Kafka
- Producers & Consumers
- Topics & Partitions
- Stream Processing
- Windowing & Watermarks
- Kafka Connect

▶ Interview Questions

MODULE 11 – Data Quality, Governance & Security

- Data Quality Dimensions
- Data Validation
- Great Expectations
- Data Lineage
- Metadata Management
- Data Governance Frameworks
- Privacy & Compliance

▶ Interview Questions

MODULE 12 – AI-Assisted Data Engineering

- Introduction to AI Assistants for Data Engineers
- Prompt Engineering
- Prompt Engineering
- AI-assisted Code Generation
- AI-assisted Debugging & Optimization
- AI-assisted Documentation
- Creating Reusable Prompts with AI

▶ Interview Questions

MODULE 13 – Production Data Engineering & DevOps

- Environments
- Version Control
- CI/CD Pipelines
- Containerization
- Infrastructure as Code
- Monitoring & Alerting
- Logging & Observability
- Production Best Practices

▶ Interview Questions

REAL-WORLD PORTFOLIO PROJECTS

Practical projects to showcase your expertise and demonstrate your skills to employers.

Project 1 – Cloud Data Pipeline

Objective: Build a fully automated, cloud-based data pipeline that ingests, transforms, and loads data into a data warehouse.
Tools used: Python, Apache Airflow, AWS S3, AWS Glue, Amazon Redshift, Docker
Outcome: A production-ready pipeline with scheduling, monitoring, and error handling.

Project 2 – Streaming Analytics

Objective: Design and implement a real-time streaming analytics system to process and analyze live data streams.
Tools used: Apache Kafka, Spark Streaming, Python, Cassandra, Grafana
Outcome: A scalable streaming system with real-time dashboards and alerts.

Project 3 – Full-stack App

Objective: Develop a full-stack application with a user-friendly interface and robust backend functionality.
Tools used: React, Node.js, Express, MongoDB, Docker, AWS
Outcome: A deployed application with user authentication, CRUD operations, and responsive design.

Project 4 – Code review

Objective: Conduct a comprehensive code review to identify areas for improvement and provide feedback.
Tools used: GitHub, GitLab, Bitbucket, SonarQube, ESLint
Outcome: A detailed code review report with recommendations for refactoring and optimization.

Project 5 – Environment management

Objective: Implement and manage multiple environments for development, testing, and production.
Tools used: Docker, Kubernetes, Terraform, Ansible, AWS
Outcome: A scalable and reproducible environment setup with automated deployment and monitoring.

Project 6 – Data Engineering with Artificial Intelligence

Objective: Apply AI techniques to enhance data engineering processes, such as data quality and anomaly detection.
Tools used: Python, TensorFlow, PyTorch, Apache Spark, Databricks
Outcome: An AI-powered data engineering solution with improved data quality and reduced manual effort.

ASSESSMENT FRAMEWORK

Rubrics and criteria used to evaluate your performance and progress.

ASSESSMENT	DESCRIPTION	PURPOSE
Quiz / Knowledge Check	Short, frequent assessments to test understanding of concepts and terminology.	Reinforce learning and identify knowledge gaps.
Lab Assignments / Practical Tasks	Hands-on exercises where learners apply concepts to real-world scenarios.	Develop practical skills and problem-solving abilities.
Peer Code Review	Learners review and provide feedback on each other's code.	Improve code quality and collaboration skills.
Final Project Evaluation	A comprehensive assessment of a capstone project that integrates multiple concepts.	Demonstrate mastery of the subject matter.

RESUME, GITHUB & LINKEDIN

Build a strong professional presence to showcase your skills and attract opportunities.

- Resume Building
- Resume Review
- GitHub Profile Setup
- GitHub Profile Review
- LinkedIn Profile Setup
- LinkedIn Profile Review
- Resume Shortlisting
- Interview Scheduling
- Job Referrals
- Offer Negotiation

OUR STUDENT

Our students are from different backgrounds and have different goals but they all share a passion for learning and growth.

READ REVIEWS

WATCH VIDEOS

CONTACT US

JOIN MENTORING ENDS HERE

Ready to take the next step? Contact us today and let's start your journey!