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MASTER DATA ENGINEERING PROGRAM

Industry-Aligned Training Program

In association with

#startupindia | nasscom | Skill India
कौशल भारत-कुशल भारत

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Rajesh Kumar VS

CEO, Aroha Technologies | iBridge360

25+
Years of
IT Industry Experience

A Message from Our CEO

At **iBridge360**, we believe that education has the power to transform lives. Founded in 2021 under **Aroha Technologies**, iBridge360 was established with a simple yet strong purpose — to make **high-quality, industry-relevant education accessible to everyone**, regardless of their background or circumstance.

With over three decades of experience in the IT industry, I have seen how the right skills and guidance can open doors to meaningful careers. That belief drives our mission at iBridge360 — to **bridge the gap between learning and employability** through innovative, technology-driven training programs, hands-on learning, and strong industry collaboration.

We are committed to empowering learners, institutions, and enterprises with future-ready skills that create real opportunities. As technology evolves, we will continue to innovate, expand our offerings, and build a learning ecosystem that helps every learner achieve their goals and make a positive impact in the world.

> Our mission is to make
> **industry-relevant education accessible and empower future-ready talent.**

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Future-Proof Your Career with

MASTER DATA ENGINEERING

STRONG MARKET | HIGH DEMAND | REWARDING CAREERS

Global Data Engineering Market Size

USD 101.0B – 115.9B

in 2026 (Estimated)

Projected Market Size by 2029/2031

USD 213B – 284.85B



Global Market Growth Rate

15% – 24%

CAGR (2024–2029)

India Data Engineering Market

USD 86.9B

by 2027

~36.7%

CAGR (Estimated)

Why Choose Data Engineering?

- Growing Market in India
- High Demand Across Industries
- Future-Ready Skills
- Attractive Career Opportunities

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Explore Master Data Engineering Program →

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In-Demand Job Roles in DATA ENGINEERING

Build the skills for high-growth careers in the data-driven world.



1 Data Engineering & Pipeline Development

Build & Manage Data Pipelines

- Data Engineer
- Big Data Engineer
- ETL Developer
- Streaming Data Engineer
- Analytics Engineer
- Data Pipeline Developer



2 Data Analytics & Business Intelligence

Turn Data into Business Insights

- Data Analyst
- Business Intelligence (BI) Analyst
- Data Visualization Specialist
- Analytics Engineer
- BI Developer
- Decision Intelligence Analyst



3 Data Platform & Cloud Technologies

Design & Manage Modern Data Platforms

- Data Architect
- Cloud Data Engineer (AWS / Azure / GCP)
- Data Warehouse Engineer
- Data Platform Engineer
- Databricks Engineer
- Snowflake Engineer



4 Data Governance, Quality & Observability

Ensure Trusted and Reliable Data

- Data Governance Specialist
- Data Quality Engineer
- Data Observability Engineer
- Master Data Management (MDM) Specialist
- Data Catalog Specialist
- Data Compliance Analyst



5 Product, Strategy & Advanced Data Roles

Drive Data Strategy and Innovation

- Data Product Manager
- Data Solutions Architect
- Data Strategy Consultant
- Data Scientist
- Machine Learning Engineer
- MLOps Engineer

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Master Data Engineering Program

Build industry-ready skills to design, develop and manage modern data systems using industry-relevant tools and technologies.

SMALL BATCH SIZE

Focused learning and better interaction

24 WEEKS

Program Duration

180 Hours
Mentor-Led Learning

INDUSTRY-RELEVANT CURRICULUM

From data foundations to modern data platforms and applied AI

PROGRAM HIGHLIGHTS

CLOUD & ANALYTICS LEARNING

AWS, Power BI and more

LMS ACCESS

Access to learning materials, recordings and resources

CLOSE MONITORING BY MENTORS

Personalized guidance, regular feedback and progress tracking

APPLIED AI LEARNING

LLMs, RAG, vector search and real-world AI workflows

CAPSTONE PROJECT

Build production-ready data pipelines using modern data platforms

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Master Data Engineering Program

Learning Path

Phase 1 — Weeks 1–4

Data Foundations

- SQL
- Python
- Databases
- Data Warehousing

Phase 2 — Weeks 5–8

Cloud & Analytics

- AWS Cloud
- Power BI
- Data Modeling
- Data Visualization

Phase 3 — Weeks 9–12

Data Engineering & Pipelines

- ETL Pipelines
- Apache Spark & PySpark
- Airflow
- Batch & Real-time Processing

Phase 4 — Weeks 13–16

Modern Data Platforms

- Databricks & Delta Lake
- Snowflake
- Data Lakehouse
- Scalable Data Solutions

Phase 5 — Weeks 17–24

Applied AI & Capstone Project

- LLMS & RAG
- Real-world Project
- Project Presentation
- Career Readiness

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Who Is This Program For?

- Software Engineers, Data Analysts, BI Developers, and IT Professionals looking to build data engineering skills.
- Cloud, Database, and ETL Professionals seeking to work with modern data platforms and pipelines.
- Fresh Graduates and Career Switchers with basic programming knowledge who want to pursue data engineering careers.

Program Syllabus

Phase 1

01 Relational Databases, SQL & Data Warehousing

- RDBMS concepts and architecture
- SQL fundamentals (DDL, DML, DQL)
- Joins, subqueries and window functions
- Normalization and data modelling
- Data warehousing and ETL concepts

Practical Focus: Query relational databases, combine data from multiple tables, design structured data models, and understand how data is organized for analytics.

02 Python Programming for Data Engineering

- Python fundamentals and syntax
- Data structures and functions
- File handling and exception management
- Working with CSV, JSON and APIs
- Database connectivity
- Modular scripting for data processing

Practical Focus: Write reusable Python scripts to read files, process structured data, interact with APIs, and connect to databases.



Program Syllabus

Phase 1

03 Data Manipulation with Pandas

- DataFrames and data inspection
- Data cleaning and missing-value handling
- Filtering, grouping and aggregation
- Merging, joining and concatenation
- Date and time processing
- Data quality checks and transformations

Practical Focus: Clean, transform, combine, and prepare datasets for reporting and downstream data pipelines.

04 Advanced Excel for Data Analysis

- Advanced formulas and lookup functions
- Data cleaning and validation
- PivotTables and PivotCharts
- Interactive reporting and dashboards
- Business data analysis exercises

Practical Focus: Analyze business datasets, summarize large amounts of information, and create reports that support decision-making.



Program Syllabus

Phase 2



05 AWS Fundamentals for Data Engineering

- Cloud concepts and AWS architecture
- Amazon S3 (storage and data lake)
- AWS IAM (access and security)
- AWS Glue (data catalog and ETL)

Practical Focus: Set up cloud infrastructure, work with storage and ETL services, and build scalable data pipelines.

06 Business Intelligence with Power BI

- Data import and Power Query
- Data modelling and relationships
- Interactive dashboards and visualizations
- Publishing and sharing reports

Practical Focus: Transform datasets into interactive reports and dashboards to gain business insights.

07 Git, GitHub & Linux Essentials

- Linux commands and file system navigation
- Git concepts, repositories and branches
- GitHub collaboration and pull requests
- Development workflow and troubleshooting

Practical Focus: Use command-line tools, manage code with Git & GitHub, and follow best practices for development workflows.

Program Syllabus

Phase 3

08 | Big Data Processing with Apache Spark & PySpark

- Distributed data processing concepts
- Spark SQL & DataFrames
- Transformations, joins and aggregations
- Partitioning and caching
- Reading & writing data (CSV, JSON, Parquet)
- Building scalable batch pipelines

Practical Focus: Work with large datasets using Spark, perform transformations, and build scalable data pipelines.

09 | Databricks & Delta Lake

- Lakehouse architecture
- Delta tables & transactions
- Schema enforcement and evolution
- Incremental processing
- Bronze, Silver & Gold layers
- Job monitoring and governance

Practical Focus: Build and manage data pipelines using Databricks and Delta Lake for real-world analytics.

10 | Snowflake Cloud Data Warehousing

- Snowflake architecture
- Data loading (stages, COPY INTO)
- SQL-based transformations
- Role-based access and security
- Cost and performance optimization
- Data sharing and collaboration

Practical Focus: Work with Snowflake to load, transform and analyze data in a cloud data warehouse.

Program Syllabus

Phase 3

11 dbt (Data Transformation & Analytics Engineering)

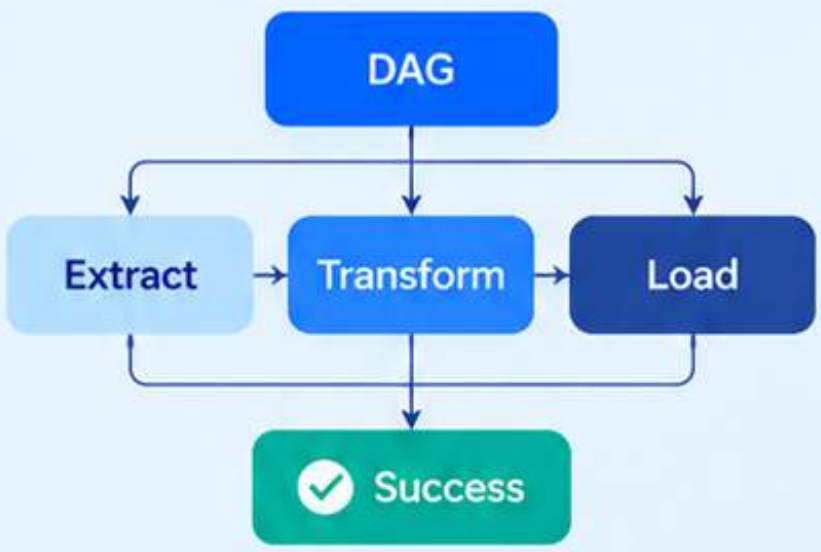
- dbt fundamentals
- Data modelling with dbt
- Transformations, tests and documentation
- Modular and reusable data models
- Data quality and testing



Practical Focus: Build and deploy transformation pipelines using dbt, create reusable models, and implement data quality tests for analytics-ready data.

12 Apache Airflow Orchestration

- DAGs, tasks and operators
- Scheduling and dependencies
- Integrating ingestion and transformation tasks
- Monitoring, retries and failure handling
- Best practices for production deployment



Practical Focus: Orchestrate and automate data pipelines using Apache Airflow, with monitoring, error handling, and production-ready workflows.

Program Syllabus

Phase 4

13 LLMs, RAG & Introductory Agentic AI

- AI, ML & Generative AI fundamentals
- Prompt engineering
- Integrating LLMs with Python
- Embeddings & vector search
- Retrieval-Augmented Generation (RAG)
- Document ingestion & grounded responses
- Tool calling & agentic workflows
- Practical applications for data professionals
- Responsible AI & hallucination mitigation



Program Syllabus

Phase 5

14

PHASE 5

End-to-End Data Engineering Capstone

Apply all the concepts you've learned in a real-world end-to-end project, from data ingestion to analytics and reporting.

01 **Business problem definition**
Understand requirements and define real-world use cases.

02 **Data ingestion, modelling & transformation**
Ingest data from multiple sources, model it and apply transformations.

03 **Building a complete data pipeline**
Develop an end-to-end scalable pipeline using modern tools and best practices.

04 **Workflow orchestration with Airflow**
Schedule and manage complex data workflows in production style.

05 **Analytical output and reporting**
Create analytical datasets and build meaningful reports and dashboards.

06 **AI-powered use case integration**
Integrate AI/ML or LLM-based use cases into the data pipeline.

07 **GitHub documentation**
Maintain clean code, documentation and version control.

08 **Final project presentation and review**
Present your end-to-end project and get feedback from mentors.



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JOB READINESS MODULE

From Learning to Industry-Ready Data Engineer

The Job Readiness Module is a dedicated, structured component designed to help learners confidently transition from training to real-world data engineering roles. This module ensures you are not only technically skilled but also professionally prepared to succeed in interviews and on the job.

01

Industry-Ready Project Portfolio

- Build and present end-to-end data engineering projects.
- Apply skills in data ingestion, transformation, orchestration and analytics workflows.
- Work on real-world use cases and showcase practical solutions.

02

Resume & CV Optimization

- Get expert guidance to build a strong, ATS-friendly resume.
- Highlight SQL, Python, ETL/ELT, cloud platforms, data warehousing, and project outcomes.
- Position your profile for Data Engineer and related roles.

03

Mock Interviews with Expert Feedback

- Practice technical interviews based on real hiring patterns.
- Discuss data pipelines, system design, SQL, Python, cloud and projects.
- Receive personalized feedback to identify gaps and improve confidence.

04

LinkedIn Profile & Personal Branding

- Optimize your LinkedIn profile for data engineering roles.
- Learn how to showcase projects, technical skills, certifications and professional experience.
- Improve recruiter visibility and build a strong professional brand.

05

Interview Preparation & Certification

- Get curated interview questions and role-specific scenarios.
- Review key data engineering concepts and best practices.
- Learn how to explain project architecture and business impact.
- Receive guidance for relevant certification preparation.

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TOOLS & TECHNOLOGIES



Tools you will work with

Gain hands-on experience with industry-relevant tools and technologies used across the data engineering ecosystem, from data ingestion to analytics and AI.

- SQL
- Python
- Pandas
- AWS
- Power BI
- Linux
- Apache Spark
- PySpark
- Databricks
- Delta Lake
- Apache Airflow
- LLMs & RAG

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LEARN
BUILD
GROW

LIMITED BATCH

Personalized Mentoring

Learn with expert mentors who guide you at every step of your **data engineering journey.**



We maintain a **limited batch size** to ensure every learner gets personalised attention and **mentoring.**

This helps you resolve doubts, clarify concepts, and stay on track throughout the program.

Your Learning Journey Partner

Each learner enrolled in this program is assigned a dedicated **Learning Journey Partner** who guides and supports you throughout your learning journey.

Doubt Resolution

Get quick and personalized help to resolve academic or technical doubts.

Guidance & Support

Receive timely guidance on assignments, projects and concepts.

Progress Tracking

Your learning progress is monitored with regular follow-ups and personalized feedback.

Learning Environment

Be part of a supportive learning community and get connected with mentors when needed.

Personalized guidance.
Better learning outcomes.

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Special Program Fee

~~₹74,999/-~~

₹59,999/-

+ GST

- Live Classes
- Hands-on Projects
- 1:1 Mentoring
- Placement Assistance

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