



# DATA ENGINEERING

100% Job Guarantee Program

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WEB  
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# About Parinitha Technologies

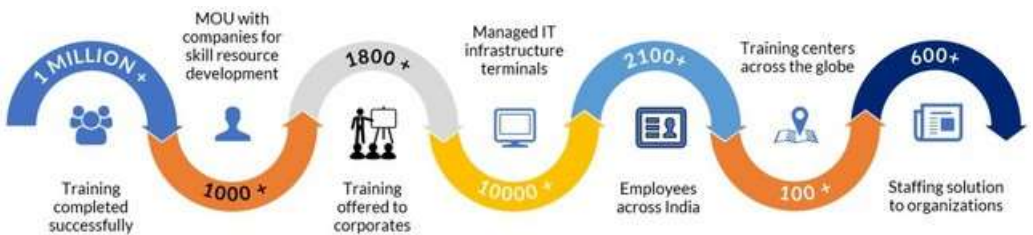
**The main motto of Parinitha Technologies Institute is to provide the best professional education to our students and to turn them into knowledgeable and successful IT professionals & 100% Job assistance is assured.**

**We make every effort to prepare our students to face the challenges of today's rapidly evolving IT marketplace. Our training manuals and exercise materials are very effective in enhancing students knowledge and skills base.**

**Students can take any of our courses separately or combine several of them to achieve higher levels of proficiency in information technology**

[Know More](#)

## Experience Summary



# OVERVIEW



## Who can take up?

Freshers / Experienced / Diploma / Graduates / Post graduates in any stream



## Duration

**500 Hrs**  
(2 Hrs/Day 12 Months, 4 Hrs/Day 6 Months or 8Hrs/Day 3 Months)



500 Hrs  
of online training



150 Hrs of LIVE mentoring  
& doubt clarification sessions



100+  
lab assignments

## Course Overview

Master fundamentals in core Java

Learn to code server side and create dynamic web pages using advanced Java

Master fundamentals in general purpose programming & scripting language – Python

Learn to design interactions, functional web pages using HTML, CSS and JavaScript

Understand the process of designing, managing & handling structured data in MySQL

Integrate third party APIs using Springs and Hibernate

Understand end to end process of building code, hosting and maintaining it

3 hours of the classroom session on weekdays

2 hours of hands-on coding on weekdays

Doubt Clarification session

Case Studies solved on every module

Talks from industry experts

Daily Assignments

Mock interviews at regular intervals

Weekly Assessments

## A DAY/WEEK WITH US TOOLS & TECH



# LEARNING TRACK

01

## Learn Python

Core language used to build data pipelines

02

## Learn Advanced Python

Write scalable, production-ready ETL code

03

## Learn SQL

Store, query, and transform data efficiently

04

## Learn ETL and Data Warehousing

Move and structure data for analytics

05

## Learn Big Data Tools

Process large datasets using Spark

06

## Learn cloud and pipelines

Deploy and automate data workflows

07

## Build Project

Understand the complete process of building code, integrating modules, hosting an application, and maintaining it.

08

## Practice Aptitude

Build your logical and reasoning skill to crack the interviews

09

## Learn Interview Etiquette

Learn a set of manners that is accepted in a profession.

# DETAILED SYLLABUS

## 1. Python for Data Engineering

Python installation & environment setup

Variables, data types, operators

Conditional statements & loops, Functions & lambda expressions

Lists, tuples, sets, dictionaries, String manipulation

File handling (CSV, JSON, TXT)

Working with dates & time

Basic data validation techniques

## 2. Advanced Python

Object-Oriented Programming (OOP)

Classes, objects, inheritance, polymorphism

Exception handling & logging

Modules & packages, Virtual environments

Multithreading & multiprocessing (basics)

Working with REST APIs, Writing reusable ETL scripts, Performance optimization techniques

## 3. SQL & Database Management

Database concepts & normalization

SQL CRUD operations

Joins (Inner, Outer, Cross, Self)

Subqueries & CTEs, Window functions

Indexing & query optimization, Transactions & constraints, Stored procedures (basics)

Relational DBs: MySQL / PostgreSQL

NoSQL overview: MongoDB

# DETAILED SYLLABUS

## 4. Data Warehousing & ETL

OLTP vs OLAP systems

ETL vs ELT architectures

Data warehouse concepts

Fact & dimension tables

Star & Snowflake schema

Slowly Changing Dimensions (SCD)

Data quality & validation checks

Incremental & full data loads

Tools overview: Airflow, dbt

## 5. Big Data Technologies

Big Data concepts & ecosystem

Hadoop architecture (HDFS, YARN, MapReduce)

Apache Spark architecture

Spark RDDs, DataFrames, Datasets

PySpark transformations & actions

Spark SQL, Performance tuning basics

Batch vs streaming processing

## 6. Cloud Data Engineering

Cloud fundamentals (AWS / Azure / GCP)

Cloud storage (S3, ADLS, GCS)

Cloud data warehouses

Managed Spark services, Data ingestion services

Workflow orchestration in cloud

Monitoring & cost optimization

Security & access management

# DETAILED SYLLABUS

## **7. Data Pipelines & Orchestration**

Apache Airflow architecture

DAG creation & scheduling

Operators & sensors

Error handling & retries

Pipeline monitoring

Version control with Git

CI/CD basics for data pipelines

## **8. Streaming & Real-Time Data**

Streaming concepts

Apache Kafka architecture

Producers, consumers & topics

Kafka with Python

Real-time data pipelines

Streaming use cases

## **9. Linux & DevOps Basics**

Linux file system & commands

Shell scripting basics

Process & memory management

Git version control

Docker fundamentals

Deployment basics

# SAMPLE CERTIFICATE



## Student Testimonials



**Santhosh Akula**  
Software developer

I had an excellent experience at Parinitha Technologies. The trainers were knowledgeable & trained me from basics, and the curriculum was well-structured and relevant to current industry standards. The hands-on training and real-world applications greatly enhanced my learning. I highly recommend this institute to anyone looking to advance their skills and career. Thank you for showing me a great path.



**B SRIKANTH**  
Cybersecurity

I had got place at a package of 7lpa as a fresher. I took cybersecurity. All the trainers are providing the full and transparency and providing the good knowledge and has good guidance from their side



**Shishira Ramesh**  
Full stack Engineer

I had an wonderful experience in this technology. 😊  
The trainer's are very good intractors here. They are also very good in explaining and clearing with our doubts.. so yea I had very good experience in parinitha technology.

### Get in Touch

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