



**ROLASOFT PROFESSIONAL COMPUTER & IT
COURSES VERSION 2.0 LATEST**

Diploma in Certified Big Data Professional

*Become a job-ready Big Data Professional in
6 months!*

Benefits of Studying Diploma in Certified Big Data with RolaSoft

✓ 1. Industry-Relevant Curriculum

Stay ahead with a syllabus designed by industry experts, focused on real-world of big data.

✓ 2. Hands-On Training

Learn by doing — build real-time projects, and gain practical data analytics experience.

✓ 3. Experienced Instructors

Gain insights from certified professionals and senior data analytics with years of teaching and industry experience.

✓ 4. Placement Assistance

Access job support services including resume building, mock interviews, and direct placement opportunities with partner companies.

✓ 5. Flexible Learning Modes

Choose between: **Online**, **Offline (at our center)**, or **Hybrid Classes**

Benefits of Studying Diploma in Certified Big Data with RolaSoft

✓ 6. Mini & Major Projects

Work on individual and group projects to strengthen your portfolio and impress future employers.

✓ 7. Certification Upon Completion

Earn a **Diploma Certificate** from **RolaSoft Technologies**, recognized by IT recruiters and employers.

✓ 8. Small Batch Size

Personalized attention and better interaction in small groups for an enhanced learning experience.

✓ 9. Affordable Fees & Installment Plans

Top-tier training at a reasonable cost, with flexible payment options.

✓ 10. Career-Oriented Skills You'll Gain at RolaSoft Technologies

RolaSoft ensures you're job-ready with the right tech stack and practical knowledge.

Diploma in Certified Big Data Professional Course Details



Duration

Six (6) Months



Schedule

Weekdays / Weekends



Learning Modes

Online, Offline (at our center), or Hybrid Classes



Start Date

New batches start every month — enroll now!



Eligibility

No prior experience required

Certified Big Data Professional Prerequisites

- ✓ Basic knowledge of programming (Python, Java, or Scala preferred)
- ✓ Understanding of databases and SQL (recommended but not required)
- ✓ Familiarity with Linux commands is a plus

Certified Big Data Professional – Program Details

Program Overview

The **Big Data** course offered by *Rolasoft Technologies Services* is a comprehensive 6-month program that covers the fundamentals and advanced concepts in the world of Big Data. The course focuses on **distributed systems, data processing frameworks, data storage, and data analysis**.

You will learn how to work with industry-leading tools and technologies like **Hadoop, Spark, NoSQL databases, and Kafka**. By the end of the course, you will be proficient in processing, storing, and analyzing large datasets, and will be prepared for roles like **Big Data Developer, Data Engineer, or Data Architect**.

Certified Big Data Professional Course Curriculum

Month 1: Introduction to Big Data and Hadoop Ecosystem

✓ Understanding the Basics of Big Data

(Characteristics of Big Data (Volume, Velocity, Variety, Veracity), Big Data Applications in Various Industries)

✓ Introduction to Hadoop

(What is Hadoop? Why is it important for Big Data?, Hadoop Architecture: HDFS, MapReduce, and YARN, Setting Up a Hadoop Cluster)

✓ Hadoop Distributed File System (HDFS)

(Data Storage in HDFS, HDFS Commands and Data Management)

✓ MapReduce Programming Model

(Introduction to MapReduce, Writing Simple MapReduce Programs, MapReduce for Large-Scale Data Processing)

✓ **Project:** Set up a local Hadoop cluster and process sample datasets

Certified Big Data Professional Course Curriculum

Month 2: Data Processing with Apache Spark

✓ Introduction to **Apache Spark**

(Spark Overview and Features, Spark vs Hadoop: Comparison of Data Processing Models)

✓ **Spark Core** and Resilient Distributed Datasets (RDDs)

(RDD Operations (Transformations and Actions), Creating and Manipulating RDDs)

✓ **Spark SQL** for Structured Data

(Working with DataFrames and Datasets, Querying with Spark SQL)

✓ **Spark Streaming**

(Real-time Data Processing, Setting up and processing streaming data with Spark)

✓ **Project:** Implement a Spark job for data transformation and analysis

Certified Big Data Professional Course Curriculum

Month 3: NoSQL Databases for Big Data

✓ Introduction to **NoSQL Databases**

(Types of NoSQL Databases: Key-Value, Document, Column-Family, Graph, Advantages of NoSQL over Traditional Relational Databases)

✓ **HBase**: Hadoop-based NoSQL Database

(Architecture and Components of HBase, CRUD Operations in HBase, Integrating HBase with Hadoop and Spark)

✓ **MongoDB**: Document-Oriented NoSQL Database

(MongoDB Basics: Collections and Documents, Querying MongoDB with the Mongo Shell, Data Aggregation and Indexing in MongoDB)

✓ **Cassandra**: Distributed NoSQL Database

(Data Model in Cassandra, Cassandra Architecture and CAP Theorem, Data Replication and Fault Tolerance in Cassandra)

✓ **Project**: Implement a data processing pipeline using HBase or MongoDB

Certified Big Data Professional Course Curriculum

Month 4: Data Integration and Stream Processing

✓ Introduction to **Apache Kafka**

(Kafka as a Real-Time Messaging System, Kafka Architecture: Producers, Consumers, Brokers, Integrating Kafka with Spark for Real-Time Data Streaming)

✓ **Apache Flume** and **Apache Nifi** for Data Ingestion

(Using Flume for Collecting and Moving Log Data, Nifi for Data Routing, Transformation, and System Integration)

✓ **Stream Processing** with Apache Spark Streaming

(Real-time Data Processing Architecture, Windowing Operations and Time-based Processing)

✓ Data Pipelines and Workflow Orchestration

(Automating Data Pipelines using Apache Airflow)

✓ **Project:** Set up Kafka for real-time data processing and integrate with Spark

Certified Big Data Professional Course Curriculum

Month 5: Big Data Analytics & Machine Learning

✓ **Big Data Analytics** Concepts

(Descriptive, Predictive, and Prescriptive Analytics, Data Mining for Big Data)

✓ **Machine Learning** with Big Data

(Introduction to ML Algorithms: Regression, Classification, Clustering, Using MLlib (Spark Machine Learning Library) for Big Data, Model Building and Evaluation with Spark MLlib)

✓ **Graph Processing** with **GraphX**

(Introduction to Graph Analytics in Big Data, Building Graphs and Graph Algorithms in Spark)

✓ **Advanced Data Processing** with **SparkR** and **PySpark**

(Spark for R and Python: Benefits and Usage)

✓ **Project:** Build a Machine Learning Model using Spark and evaluate its performance

Certified Big Data Professional Course Curriculum

Month 6: Big Data Security, Monitoring & Final Project

✓ Security in Big Data

(Data Privacy and Security Concerns in Big Data, Authentication and Authorization in Hadoop and Spark, Securing Data in HDFS and Spark)

✓ Monitoring and Management of Big Data Clusters

(Cluster Monitoring Tools: Ambari, Ganglia, and Nagios, Performance Tuning for Hadoop and Spark, Troubleshooting Big Data Jobs)

✓ Final Project:

(Implement a Full-Scale Big Data Solution, Integrate Hadoop, Spark, and NoSQL Databases, Build a Real-Time Data Processing Pipeline and Analytics Application)

Tools & Technologies Used

Tools & Technologies Used for **Certified Big Data Professional Course** are:

- ✓ **Apache Hadoop** (HDFS, MapReduce, YARN)
- ✓ **Apache Spark** (Core, SQL, Streaming, MLlib, GraphX)
- ✓ **Apache Kafka** for Real-Time Data Streaming
- ✓ **NoSQL Databases:** MongoDB, Cassandra, HBase
- ✓ **Apache Flume** and **Apache Nifi** for Data Ingestion
- ✓ **Apache Airflow** for Workflow Automation
- ✓ **Ambari** and **Ganglia** for Cluster Monitoring
- ✓ **PySpark** and **SparkR** for Big Data Processing in Python and R

Final Capstone Project (End of 6 Months)

Students will complete an **industry-level project** in **Certified Big Data Professional** :

- ✓ Implement a Full-Scale Big Data Solution, Integrate Hadoop, Spark, and NoSQL Databases, Build a Real-Time Data Processing Pipeline and Analytics Application

Certified Big Data Professional Learning Outcomes

By the end of this course, students will be able to:

- ✓ Understand the architecture and components of the **Hadoop ecosystem**
- ✓ Use **Spark** for large-scale data processing and real-time streaming
- ✓ Work with **NoSQL databases** such as MongoDB, Cassandra, and HBase
- ✓ Integrate **Kafka** for real-time data streaming and processing
- ✓ Implement **machine learning models** on big data using **Spark MLlib**
- ✓ Build, deploy, and monitor **Big Data applications** and data pipelines
- ✓ Develop expertise in **data integration, security, and scalability** for Big Data systems

Certification Obtain

After completion of the program, the student will be awarded with a certificate:

Diploma in Certified Big Data Professional

The program also prepares students for industry certifications such as:

- ✓ Cloudera Certified Associate (CCA) Data Analyst / Data Engineer
- ✓ Databricks Certified Data Engineer Associate / Professional
- ✓ Google Professional Data Engineer (GCP)
- ✓ Certified Big Data Professional (CBIP)

Certified Big Data Professional Career Opportunities

- ✓ Big Data Engineer
- ✓ Machine Learning Engineer (Big Data Focused)
- ✓ Data Scientist (Big Data)
- ✓ Cloud Data Engineer / Cloud Big Data Developer
- ✓ Business Intelligence (BI) Engineer – Big Data

Who Should Take This Certified Big Data Professional ?

Who Should Take This **Certified Data Analytics Professional**?

- ✓ IT professionals looking to transition into Big Data
- ✓ Data analysts and engineers seeking to enhance their skills in big data technologies
- ✓ Students pursuing careers in **data engineering** or **data science**
- ✓ Business professionals interested in leveraging big data to improve decision-making
- ✓ Anyone looking to understand how to manage and process large-scale data

Rolasoft Technologies Services

Rolasoft Technologies – Services Offered

✓ **SOFTWARE DEVELOPMENT COMPANY**

(MOBILE APPLICATION, WEB APPLICATION, DESKTOP APPLICATION, CUSTOMIZED APPLICATION, E-COMMERCE WEBSITE)

✓ **PROFESSIONAL COMPUTER AND IT EDUCATION**

(TOP-UP PROGRAMS, DIPLOMA PROGRAMS, CERTIFICATE PROGRAMS, TECH @ SCHOOL, CORPORATE PROGRAMS, SIWES PROGRAMS, CUSTOMIZED PROGRAMS)

✓ **DIGITAL ADVERTISING AND BUSINESS BRANDING**

(SOCIAL MEDIA MARKETING, EMAIL MARKETING, CONTENT MARKETING, WEBSITE SEO, BRANDED CLOTHING, STICKERS AND TAG, CUSTOM BRANDING, AND MANY MORE)

✓ **INTERNATIONAL UNIVERSITY ADMISSION PROCESSING**

(AMERICA, UK, CANADA, EUROPE, AFRICA, AND MANY MORE)

Contact & Registration

 Phone: +234 8032867212, +234 8082171242

 Email: info@rolasofttech.com

 Website: www.rolasofttech.com

 Address: 2, Martins Street Off Ojuelegba Road, Yaba, Lagos State.



**Enroll Today & Start Your
Big Data Professional Journey!**

*Shape your future with
Big Data Expert.*