



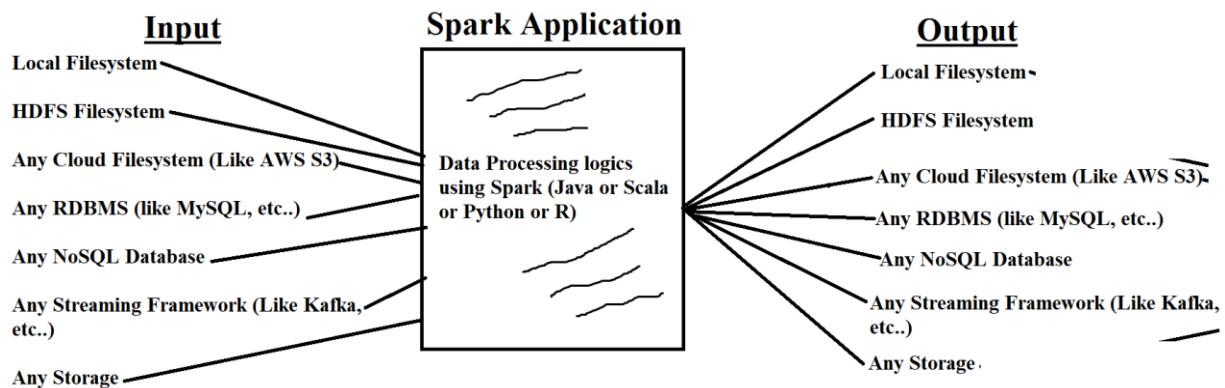
## PySpark Data Engineering with AWS

### Data Engineering

“Data engineering refers to the building of systems to enable the collection and usage of data. This data is usually used to enable subsequent analysis and data science; which often involves machine learning.”

### Apache Spark:-

- ➔ Is a Data Processing Framework. We can implement Spark Applications using Java or Scala or Python or R Language.
- ➔ It has only Data Processing. It does not have storage.
- ➔ It can process any data.



### Apache Data Engineering Components:-

1. Apache Hadoop – Storage (HDFS)
2. Apache Hive – Data Warehouse
3. Apache Spark (Java or Scala or Python (**PySpark**) or R (SparkR)) – Data Processing
4. Apache Kafka – Streaming Framework
5. Apache Cassandra, Apache HBase – NoSQL
6. Apache Oozie (less Usage) , Apache Airflow (Mostly Used) – Workflow, Schedule

### Data Engineering Servers on,

**On-Premise (Our Own Server) or Any Cloud Computing (AWS or Azure or GCP)**

**Now Every Cloud Vendor has Their Own Data Engineering Technologies.**

**AWS has its own Data Engineering Components.**



# PySpark Data Engineering with AWS

## PySpark Data Engineering with AWS

### Pre-Requisites

1. Python for Data Engineering
2. SQL for Data Engineering (SQL with Any RDBMS (MySQL, Oracle, PostgreSQL, M.S SQL Server, IBM DB2, etc..))
3. Linux Essentials for Data Engineering

### PySpark Data Engineering with AWS

1. Data Engineering Pre-Requisites
2. AWS Services for Data Engineering  
AWS Foundation (AWS Intro, AWS Account Creation, Free-tier, AWS Global Infrastructure, etc..)  
AWS EC2  
AWS IAM
3. PySpark  
PySpark Foundation  
PySpark Core Programming  
PySpark SQL Programming  
PySpark Streaming Programming
4. AWS S3
5. AWS RDS
6. AWS EMR
7. AWS Glue
8. AWS Athena
9. AWS Kinesis
10. AWS Lambda
11. AWS Redshift
12. AWS Steps Functions
13. Apache Airflow
14. End-to-End Flow Application

Duration: 45 to 50Days (Daily 1:30Mins)

Fee : 20K/-- Offer Price 15K

**Monday : 19<sup>th</sup> December, 2022 -- 7PM IST & 9PM IST**

Contact : +91-9133161144

Monday to Friday

Optional: Sat

Sunday – No Class

Material + Workspace + Videos Access from GDrive



## PySpark Data Engineering with AWS

By

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## PySpark Data Engineering with AWS

### **GCP (Google) Data Engineering:-**

#### **GCP Basic Services**

- GCP Regions & Zones
- GCP Services Introduction
- IAM
- Provisioning Compute Engine
- Deploy Application on App Engine
- etc..

#### **GCP Cloud Storage**

- Google Cloud Storage
- Cloud Block Storage
- etc..

#### **GCP Database**

- Google Cloud SQL
- Cloud Filestore
- Cloud Datastore
- Cloud Memorystore
- Cloud Bigtable
- etc..

#### **GCP Data Processing**

- Google Cloud Pub/Sub
- Google Bigquery
- Cloud DataFlow
- Cloud DataProc
- Cloud Data Fusion
- etc..



## PySpark Data Engineering with AWS

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## PySpark Data Engineering with AWS

### AWS Data Engineering

1. Introduction
2. Python for Data Engineering
3. Linux Essentials for Data Engineering
4. SQL for Data Engineering
5. AWS Services for Data Engineering
6. AWS S3
7. PySpark Cluster Setup on AWS
8. PySpark Development
  - PySpark Core Programming
  - PySpark SQL Programming
9. AWS Kenesis
10. PySpark Streaming
11. AWS Redshift
12. PySpark Integrations
  - PySpark Integration with AWS S3
  - PySpark Integration with AWS Kenesis
  - PySpark Integration with AWS Redshift
13. Databricks with AWS Introduction
14. AWS Glue Introduction
15. AWS Athena Introduction
- Etc..

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