



## **AWS AWS DATA SPECIALITY**

MASTERCLASS | JOB ORIENTED | **REAL-TIME PROJECT** 



# Welcome to the Future of Data Management!





### BOOK A SEAT

info@levelupedu.net +91 89777 21349 / 903 072 5482 www.levelupedu.net



## Elevate Your Skills, Ignite Your Career

Are you ready to embark on a journey of knowledge and innovation? Welcome to our **AWS**Data Speciality Training Program, where learning meets limitless possibilities.





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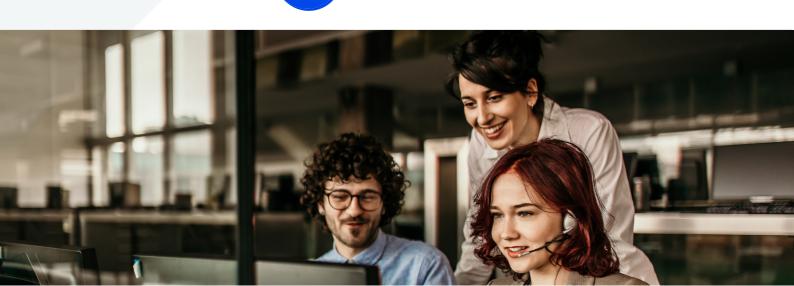
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## About the Program

Discover our intensive AWS Data Specialty Program, meticulously crafted for data professionals and IT experts.

Led by certified AWS experts, this program offers hands-on learning in key areas like data lakes, databases, analytics, and security protocols.

Participants gain practical skills, ensuring they are well-prepared for real-world data challenges and the AWS Certified Data Analytics – Specialty exam.

Beyond the classroom, our dedicated career support services guide participants toward diverse opportunities in the dynamic field of data analytics.



### **Key Features**



Industry Relevant Curriculum



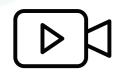
Limited class size for an optimal experience



Constantly
Updated
According to
Industry Trends



50+ hands-on assignments and 2 capstone



Life-time Access to the recorded sessions



1:1 mock interview Sessions



Career Guidance & Placement Support

Get in Touch
With Us









### **Tools Covered**





Amazon S3



Data Pipiline



Python



**Pyspark** 



databricks

**Databricks** 



Amazon RDS



AWS Redshift



Amazon DynamoDB



AWS Lambda



AWS Cloud Formation

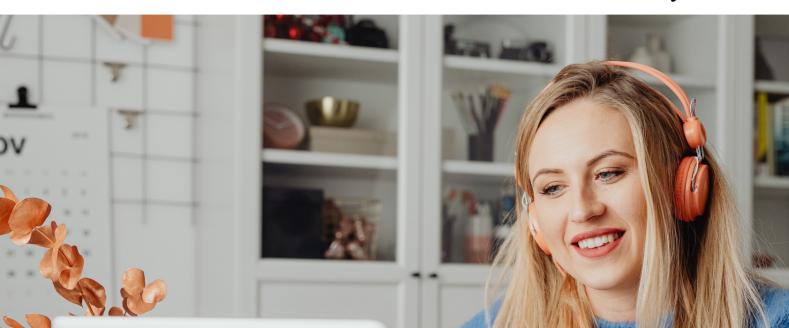


Amazon Anthena



AWS Glue

many more..





## MODULE 1: INTRODUCTION TO AWS DATA ENGINEERING

- The Role of Data Engineering in Modern Organizations
- Overview of Data Engineering Workflow
- Understanding Big Data Technologies
- Introduction to AWS Data Services
- Data Lakes vs. Data Warehouses
- Best Practices in Data Engineering
- Industry Trends in Data Engineering

#### **MODULE 2: DATA INGESTION**

- Introduction to Data Ingestion
- Real-time Data Streaming with Amazon Kinesis
- Batch Data Ingestion Strategies
- Data Replication Techniques
- Data Extraction from Various Sources (RDBMS, NoSQL, APIs)
- Change Data Capture (CDC) Methods
- Data Validation and Quality Checks during Ingestion

#### **MODULE 3: DATA STORAGE**

- Introduction to Data Storage in AWS
- Amazon S3 and its Storage Classes
- Data Partitioning and Bucket Design in S3
- Amazon Redshift as a Data Warehouse



- Optimizing Data Storage Costs
- Data Archival and Lifecycle Policies
- Introduction to NoSQL with Amazon DynamoDB

#### **MODULE 4: DATA TRANSFORMATION**

- Introduction to Data Transformation
- ETL Process Overview
- AWS Glue for Data Cataloging and ETL
- Data Transformation Best Practices
- Lambda Functions for Data Transformation
- Real-time Data Transformation with Kinesis
- Data Validation and Cleansing Techniques

#### **MODULE 5: DATA PROCESSING**

- Introduction to Data Processing
- Working with AWS EMR (Elastic MapReduce)
- Data Processing with Apache Spark on AWS
- Optimization Techniques for Data Processing
- Data Partitioning and Shuffling in EMR
- Resource Management in EMR (YARN)
- Real-time Data Processing with Kinesis Data Analytics

#### **MODULE 6: DATA ORCHESTRATION**

- Introduction to Data Orchestration
- Workflow Design with AWS Step Functions
- Data Pipeline Orchestration with AWS Data Pipeline



- Error Handling and Retry Strategies
- Scheduling and Triggering Data Workflows
- Managing Dependencies between Workflow Steps
- Coordinating Data Tasks with Step Functions

## MODULE 7: DATA WAREHOUSING AND BUSINESS INTELLIGENCE

- Introduction to Data Warehousing
- Amazon Redshift Architecture and Concepts
- Data Modeling Best Practices in Redshift
- Designing Efficient Redshift Queries
- Data Visualization with Amazon QuickSight
- Building Interactive Dashboards
- Extract, Transform, Load (ETL) for Business Intelligence

## MODULE 8: DATA GOVERNANCE AND SECURITY

- Introduction to Data Governance
- AWS IAM (Identity and Access Management) for Data Engineers
- Encryption at Rest and in Transit
- Compliance and Regulatory Standards
- Fine-Grained Access Control
- Data Masking and Anonymization
- Audit Trails and Logs



## MODULE 9: DATA MONITORING AND LOGGING

- Introduction to Data Monitoring
- AWS CloudWatch Metrics and Alarms
- Custom Metrics and Dashboards
- Log Analysis and Insights
- AWS CloudTrail for Auditing and Compliance
- Integration with SIEM (Security Information and Event Management) Systems
- Anomaly Detection and Automated Remediation

## MODULE 10: DATA QUALITY AND DATA LINEAGE

- Introduction to Data Quality
- Data Validation Techniques
- Data Cleansing and Enrichment
- Error Handling and Logging for Data Quality
- Data Lineage and Impact Analysis
- Metadata Management with AWS Glue Data Catalog
- Data Quality Monitoring and Reporting

## MODULE 11: DATA ENGINEERING BEST PRACTICES

- Introduction to Data Engineering Best Practices
- Design Patterns for Scalability
- Performance Optimization Techniques
- Cost Optimization and Resource Management



- Fault Tolerance and Error Handling Strategies
- Version Control and Deployment Management
- Security Best Practices for Data Engineering

## MODULE 12: CAPSTONE PROJECT (HANDS-ON)

## MODULE 13: REAL-WORLD USE CASES AND CASE STUDIES

- Industry-Specific Data Engineering Use Cases
- Case Studies in Finance, Healthcare, E-commerce, etc.
- Best Practices from Real-world Implementations
- Challenges and Solutions in Complex Scenarios
- Scalable Architectures for High-Volume Data

## MODULE 14: AWS DATA ENGINEERING CERTIFICATION PREPARATION

- Review of Key Concepts for AWS Data Engineering Certification (if applicable)
- Practice Exams and Mock Assessments
- Tips and Strategies for Certification Success
- Resources for Further Exam Preparation



## **CAPSTONE** PROJECTS

## HEALTHCARE DATA INTEGRATION AND ANALYSIS

Design a data integration and analysis pipeline for a healthcare organization. Ingest patient records, medical imaging data, and clinical notes from various sources. Use AWS Glue for ETL processes to clean and transform the data. Store the processed data in Amazon DynamoDB for fast access. Implement data governance and security measures for compliance. Provide a visualization dashboard for healthcare professionals to track patient outcomes.

### **SKILLS DEMONSTRATED**

- Data cataloging and ETL with AWS Glue.
- NoSQL database design and operations with Amazon DynamoDB.
- Implementing data governance for sensitive healthcare data.
- Creating interactive dashboards for healthcare professionals.



## CAPSTONE PROJECTS

## HEALTHCARE DATA INTEGRATION AND ANALYSIS

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## CAPSTONE PROJECTS

## IOT DATA PROCESSING AND VISUALIZATION

Create a solution for processing and analyzing data from IoT devices. Ingest sensor data from a fleet of IoT devices using AWS IoT Core. Process and enrich the data using AWS Lambda and AWS Glue. Store the processed data in Amazon Redshift for historical analysis. Build a real-time dashboard to monitor device status and trigger alerts for anomalies using Amazon QuickSight.

#### SKILLS DEMONSTRATED

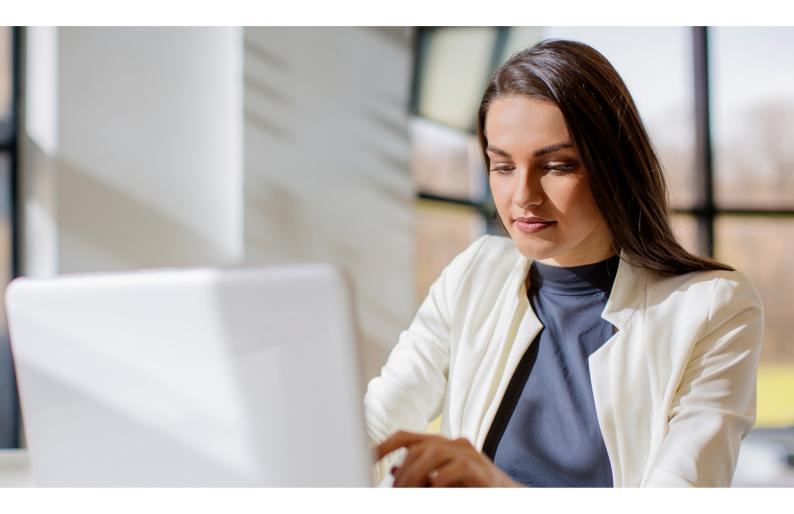
- Implementing IoT data pipelines with AWS IoT Core.
- Serverless computing for data processing with AWS Lambda.
- Data warehousing and analytics with Amazon Redshift.
- Real-time monitoring and alerting with Amazon QuickSight.







### **Eligibility Criteria**



- Bachelor's degree in any field
- Familiarity with database concepts and SQL.
- Basic understanding of data processing.
- Working Professionals >1yrs
- Optional: Prior experience in data engineering or related fields.
- Basic computer literacy and operating system knowledge.

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### Certification

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For their successful complete Level In Cloud Solution	letion of course ns Pvt Ltd in the month of	year
at Levelop Cloud solution		
	the/her has acquired the skills and We wish him/her all the b	
We are confident that	the/her has acquired the skills and	

### **Industry Recognised Certification**

### **Trainer Profile**

### Sateesh Pabbathi

**Author & Cloud Expert** 





With over two decades of industry experience, he stands as a seasoned expert in the realm of cloud computing.

Holding certifications as a Microsoft Certified Trainer, AWS Certified Data and DevOps Engineer, GCP Certified Architect, Kubernetes Certified Administrator and more, his expertise is both broad and deep.

Among his notable achievements is the curation and design of courses for prominent Ed–Tech platforms like Upgrad, Simplilearn and more. Through these endeavors, he has successfully trained a substantial cohort of over 4000 students in the dynamic domain of Cloud Computing, arming them with the skills and knowledge necessary for thriving in this rapidly evolving landscape.

### **Trainer Profile - Certifications**









Grab the Offer Now for 37,200/-

19,500/-

\*GST APPLICABLE