



Data Engineering Interview Questions



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Job Details

- **Position:** Data Engineer
- **Experience:** 4 Years
- **Location:** Bengaluru, Hyderabad, Pune, Chennai
- **Work mode:** Office
- **Compensation:** ₹32–₹47 LPA

Breakdown: Base Salary + Bonus + Stock Options

Stock Vesting: Typically over 4 years

- **Total Rounds:** 4
- **Top Required Skills:**
 1. SQL Mastery
 2. Python Coding
 3. Big Data Tools
 4. System Design
 5. AWS Cloud
 6. Behavioral Fit

Round 1

Data Modeling & SQL

1. Write a SQL query to fetch the top 3 highest-earning employees from each department.
2. How would you design a data model for an e-commerce application (customers, products, orders)?
3. Explain normalization and denormalization—when would you use each?
4. What is a composite primary key, and in which scenario would you use it?
5. How do you handle performance tuning in SQL queries?
6. How would you implement slowly changing dimensions (SCDs) in a data warehouse?

Round 2

Big Data & Distributed Systems

1. How would you design a data pipeline to process 1 TB of data daily in real-time?
2. Explain the differences between Hadoop, Spark, and Flink. Which one would you choose for real-time data processing and why?
3. How do you optimize data storage for large-scale datasets on AWS S3?
4. Explain partitioning in Hive and how it improves query performance.
5. How would you process a huge dataset using AWS Glue or EMR?

Round 3

Big Data & Distributed Systems

1. Describe your experience with AWS Redshift and how you optimized query performance.
2. How would you architect a scalable ETL pipeline using AWS Lambda and Step Functions?
3. Explain how you would handle security and data governance in an AWS data lake setup.
4. Discuss your experience with AWS Glue, Redshift, and S3. What are the best practices for optimizing storage and retrieval?
5. How would you implement real-time data ingestion and processing using Kinesis or Kafka?

Round 4

Hiring Manager

1. Discussion around past experience and projects, including some resume-based questions.
2. What were your good and bad experiences with past employers?
3. How will you work in a team for tight project delivery timelines?
4. What are you expecting in your next job role?

Thank You

Best of luck with your
upcoming interviews
– you've got this!

