

Bitwise Data Engineer Interview Guide – Experienced 2+

Round 1: Technical Interview

1. Introduction & Project Overview

The interviewer asked me to introduce myself and provide an overview of my completed projects, focusing on the tools, technologies, and challenges.

Example Questions:

- Describe a data pipeline you built and optimized.
- What challenges did you encounter when scaling your project?
- How did you ensure data quality and integrity?

2. SQL Questions

- **Question 1:** Find the 2nd highest salary for each department using the DENSE_RANK() function.
- **Follow-up:** Why not use ROW_NUMBER() instead? Discuss pros and cons.
- **Question 2:** Calculate the cumulative transaction amount for each month using a transaction table.

Key Concepts Tested:

- DENSE_RANK() vs. ROW_NUMBER() usage.
- CTEs and window functions (SUM() OVER for cumulative sums).
- Handling NULL values in joins.

3. Spark & PySpark Questions

- Discussed Spark cluster management and optimization techniques.
- Solved the 2nd highest salary problem using PySpark.

Example Questions:

- How do you manage memory allocation in Spark?
- How would you handle skewed data in a Spark job?
- Write PySpark code to filter and count records.

Round 2: Client Interview (Gartner)

1. Introduction & In-Depth Project Discussion

The focus was on the architecture, design choices, and contributions to my projects.

Example Questions:

- Why did you choose a particular data storage solution?
- How did you ensure fault tolerance in your pipelines?

2. AWS Questions

- **Lambda vs. Glue:** Discussed use cases for both services.
- **S3 Storage Options:** Described Standard, Intelligent-Tiering, and Glacier.
- **Step Functions:** Explained orchestration of workflows.
- Optimizing long-running PySpark scripts on EMR.

Key Concepts:

- AWS services for data processing.
- Cost optimization strategies and performance tuning.

3. SQL Questions

- Predicted outputs for different join types using two sample tables with NULL values.
- Query to find employees earning more than their managers.

Round 3: Managerial Interview

1. Introduction & Project Summary

The manager asked for a summary of my experience and a deeper discussion about key projects.

Example Questions:

- What motivates you to pursue a change in your career?
- Can you share a time you faced a significant challenge and how you overcame it?
- What lessons have you learned from project failures?

Preparation Tips:

1. **Master SQL:** Focus on window functions, complex joins, and handling NULL values.
2. **Hands-on with PySpark:** Practice transformations, optimizations, and writing efficient code.
3. **AWS Knowledge:** Understand core services like Lambda, Glue, EMR, and cost management strategies.
4. **Behavioral Skills:** Be ready to discuss challenges, teamwork, and leadership experiences.

Glassdoor Bitwise Review –

<https://www.glassdoor.co.in/Reviews/Bitwise-Reviews-E587355.htm>

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