

**VISA**

# Data Engineering Interview Questions



Ankita Gulati

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# Job Details

- **Position:** Senior Data Engineer
- **Experience:** 5+ years
- **Location:** Bangalore
- **Work mode:** Office
- **Compensation:** ₹50+ LPA
- **Total Rounds:** 5
- **Top Required Skills:**
  1. SQL
  2. PySpark / Python
  3. Cloud Data Engineering
  4. ETL / Data Modeling
  5. Big Data & Streaming
  6. System Design

# Round 1

## Data Structures & Algorithms

1. Solve the Ugly Number II problem
  - Generate the nth ugly number where ugly numbers are positive integers whose prime factors only include 2, 3, and 5.
2. Solve a sliding window problem.
  - Example: Find the maximum sum/length/unique substring in a sliding window.

# Round 2

## Technical

1. SQL: Find the highest salary per department.
  - Use window functions (RANK, DENSE\_RANK) or GROUP BY.
2. Spark Internals:
  - Explain how Spark executes jobs, stages, and tasks.
  - Difference between narrow vs. wide transformations.
3. Spark Optimization Techniques:
  - Partitioning and bucketing.
  - Caching and persistence.
  - Broadcast joins vs. shuffle joins.
  - Reducing shuffle overhead.

# Round 3

## Hiring Manager

1. Discuss your past project experience in detail.
  - Data volumes handled, architecture used, and bottlenecks solved.
2. Scenario-Based Question:
  - How would you design or debug a pipeline under tight deadlines?
  - How do you ensure data accuracy, lineage, and fault tolerance?
3. Discuss the scope of work at Visa and how your experience aligns with it.

# Round 4

## HR Discussion

1. Discussion on salary expectations and numbers.
2. Reason for exploring new opportunities.
3. Alignment with Visa's culture and long-term career goals.

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# Round 5

## Collaboration & Leadership

1. What is your leadership style, and how do you adapt to different teams?
2. Tell me about a time you handled failures in a critical data pipeline.
3. How do you resolve conflicts within a technical team?
4. Give an example of how you celebrated achievements with your team.
5. How do you manage differences in opinions between engineers or stakeholders?
6. Why are you considering leaving your current company?

*Thank You*

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

