Chart your own path with Amazon

Data Engineer

Assessment preparation pack

Overview of the position

As a Data Engineer you will be working on building and maintaining complex data pipelines, assemble large and complex datasets to generate business insights and to enable data driven decision making and support the rapidly growing and dynamic business demand for data. You will have an opportunity to collaborate and work with various teams of Business analysts, Managers, Software Dev Engineers, and Data Engineers to determine how best to design, implement and support solutions. You would ensure the accuracy and availability of data to their customers, and understand how technical decisions can impact their business's analytics and reporting. Data engineers work with data in large volume and velocity, often using the latest AWS and open source technologies. You will be challenged and provided with tremendous growth opportunity in a customer facing, fast paced, agile environment.

Training:
As an new member, you will go through induction training before joining your team. You will drive your own learning and development with guidance and coaching from your manager, buddy, and teammates. Your manager will have an Embark Launch Plan to help you get settled and familiarize yourself with the broader company as well as your team and project.

Recruiting Process

Online Assessment: In the first stage, you will attempt an online assessment. (Duration-120 minutes). You will be assessed on tech skills like pseudo codes, database query languages, and data modelling and warehousing. We will provide you with the outcome of your assessment within 5 business days.

Virtual Interviews: If your online assessment has been successful, you will be invited to a series of virtual interviews. You will have a maximum of 2 interviews, 45 minutes each
Part of the interview will focus on behavioural or competency-based interview questions, so prepare some examples about your past experiences and real life scenarios. The remainder of the interview will be testing your technical skills.
As you think about examples from your experience, please follow the STAR method. This method will help you organize your thoughts and prepare a structured response to the interviewer's questions by discussing the specific situation, task, action, and result of the situation you are describing. Whilst this is a different approach to many standard interviews, we feel this offers you a great opportunity to gather different perspectives on Amazon, the role, and the team so that you can build a picture of what it would be like to work here. We actively encourage you to ask questions to each interviewer to gain as much insight as possible. More information about our Leadership Principles can be found here.

Recruiting Process

Offer stage: The virtual interview is the final stage of the process. After this interview your recruiter will share the outcome within five days. If your application was not successful this time around please don't be discouraged, we welcome your application again, six months from the date you received your outcome, you may apply again.

NOTE: Amazon does not provide interview feedback as a matter of company policy.

Technical Interview Topics

Our interviews are mainly focused on how well you can use your acquired knowledge to troubleshoot real world problems. This document outlines areas that you should prepare ahead of your interview.

SQL: You should have a hold over Basic SQL Fundamental concepts (ACID Properties, Types of keys etc.). Understanding of different types of joins, subqueries, group by, where and having clause, and aggregate functions. Knowledge of normalization and denormalization concepts. Advanced SQL queries involving joins, subqueries, window functions, and performance optimization. Handling complex data transformations using SQL is a good to have to excel in the role.

Coding and Scripting: Basic scripting skills (Python, Bash, etc.) for automation, data handling and transformations. Ability to write efficient and optimized code.

You're Ready!

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Technical Interview Topics cont..

Data modelling and warehousing concepts: You should have an understanding of star schema, snowflake schema and other data modelling techniques. (Fact and Dimension Tables). You should be able to design data models scalable and suitable for analytical queries and reporting. Ability to design systems that can handle large volumes of data and optimizing for performance is a good to have skill to excel in the role.

ETL Processes: To excel in the role you should have the ability to design and implement ETL workflows to move and transform data. With this, you should be able to handle data extraction from various sources, data cleansing, and loading into target systems.

Behavioral and Situational Cases: You may be asked questions that are scenario-based or behavioral to assess how you handle real-world challenges and collaborate with others.

Ambiguity: Interviewers will often purposefully give you a problem or set of instructions that seem vague or lacking important information. It is your responsibility to deal with such ambiguity by gathering additional requirements and asking clarifying questions before diving head first into coding.

Coachability: Whether you find yourself struggling with a particular problem or you have come up with a workable solution that the interviewer deems sub-optimal, he/she may offer you guidance. Take their feedback and work with it. Amazon engineers spend their workdays dealing with technical challenges of mind-boggling scale so if they offer you guidance that takes you in a direction you are unaccustomed to or that feels counterintuitive, have a go.

General Interview Topics

Personal Experience: We really want to get an understanding of how you think and how you solve problems. As much as possible, please try to talk things out and think out loud.

Leadership Principles: Spend time familiarizing yourself with the Amazon Leadership Principles, and use them as a guide to choose the stories and anecdotes from your career that you decide to share during your interview. We are aware that you may not have work experience examples to speak to; however, you are free to provide examples from your experiences at university, team projects, extracurricular activities, past internships, or even life in general. Examples that speak to tech are also advantageous but not mandatory.

Data Driven: Amazon is a very data-driven company, so try to provide examples using metrics/data. There's nothing better than supporting a success story with a great data point.

Customer Focus: Above all, think about customer impact. We are truly obsessed with our customers. We would like you to be able to take customer wants and needs into account when making and providing any products or services.

Motivation: Be prepared to speak about your motivation for the role and why you are interested in Amazon.

"I applied for an internship role at Amazon in 2022 as I had heard from a few friends about how the internship has been a great learning experience for them. I had a great time during my six-month internship. I loved my project and the peers I worked with were very helpful. After, I was offered a full-time position, I decided that Amazon is the place for me."

Paula – '22 intern and '23 graduate.

Visit <u>interviewing at Amazon</u> for more information. Good luck!