# **FACEBOOK**

**DATA ENGINEERING** 

# Initial Interview Guide



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Welcome to your prep guide for your data engineer initial interview at the Facebook company. Our data engineers put together this guide so you know what to expect and how to prepare.

## Interview overview

# What will the format and timing of your initial tech screen look like?

Your initial screen will be a 60-minute phone call, during which you'll share your solutions on your computer via CoderPad, an online code-sharing interface. Prior to your interview, please familiarize yourself with the CoderPad interface; you can check out **CoderPad's tips and tricks** as you're preparing. Please ensure you join your custom CoderPad link a few minutes before your interview (our Coordination team will send you this link upon confirmation of your interview date / time). Please also make sure that you have strong phone and internet connectivity in a quiet zone.

Interview: 60 Minutes

Your conversation with an engineer will be divided into the following:

Introduction: 5 minutes
SQL Screen: 25 minutes
Coding Screen: 25 minutes

• Questions and Closing: 5 minutes

As you start to prepare for your initial interview, the following video will help you understand your interview overview, logistics and recruiter:

Facebook Phone Interview Preparation Video (password: c0nnectthew0rld).

Keep in mind throughout your prep that speed and efficiency are important. Practice with time constraints while you're working through the SQL and coding questions so that you're prepared for both your SQL and coding screens during your interview.

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# **SQL** screen prep

# How is the SQL portion of your tech screen structured?

Your SQL screen will be 25 minutes, where you'll have an opportunity to work through as many as five questions. The purpose of this screen is to evaluate your understanding of fundamental SQL concepts.

We'll ask you to write a series of SQL queries using a PostgreSQL database, yet knowing standard ANSI SQL is sufficient for the interview.

Working with a business-related schema and dataset, we'll ask you to write SQL to help answer various business questions. Be prepared to cover fundamental SQL concepts:

- Joins (inner, left / right outer, full outer, cross)
- UNION versus UNION ALL
- Correlated subqueries
- Aggregations
- "Where" versus "having"
- Handling NULL values
- Case statements, etc.
- Filters
- Groupings
- Rankings
- Verifying results and taking care of exceptions and NULL handling

The Appendix / Resources section contains links to practice SQL interview question samples.

# **Coding screen prep**

# How is the coding portion of your tech screen structured?

The coding screen will be 25 minutes, during which you'll have an opportunity to work through as many as five questions. We support a few different coding languages, so please ensure you've confirmed your preference with your recruiter **prior to the interview**, as we'll ask you to solve a series of programming questions using your preferred language. We recommend practicing the coding interview question samples listed in links in the Appendix / Resources section.

# 7 Tips for your initial screen

# Data engineers share insider views on what works best

#### 1. Have a clear picture first.

Discuss the algorithm you want to apply with the interviewer first. Jumping straight into coding without having a clear idea on what you want to do, or changing your mind halfway through, could slow you down.

#### 2. Think out loud.

It helps your interviewer follow along and learn about your problem-solving skills. They'll want to understand why you're making certain decisions. (For example: Why subqueries instead of joins?)

# 3. Don't worry about things like typos, syntax, etc.

Some people have the right code sitting there, but they take another minute or two going over everything manually trying to check if it's all correct. Feel free to hit "run" to see what error messages come up.

## 4. If you aren't sure about syntax.

If you aren't sure about syntax, just ask the interviewer: "What's the syntax to check if an element is in a list again?"

## 5. Be open.

Interviewers are asking questions that are not meant to stump you, but rather they're meant to get to know your skills and gauge how in-depth your knowledge is. It's OK not to know something. Communicate openly with the interviewer, approaching questions as a chance to collaborate with them.

#### 6. Listen for hints.

Interviewers might ask questions such as, "Are you sure you want to use a loop there?" This gives you an opportunity to consider alternatives to how to solve the problem, and to demonstrate that you can learn on the spot and implement feedback.

#### 7. Questions.

You'll most likely have some time at the end for questions for your interviewer. Some people find it easier to come up with a few questions in advance rather than thinking of them on the spot.

# Appendix / resources

# Links to exercises, information, and guides to help you prepare

Facebook data engineers collected some helpful resources with content and activities for your initial tech screen. Take a look through the list as you prepare, and practice these problems. Keep in mind these questions are lower in difficulty than the actual problems you'll receive. Think of these practice problems as a baseline, and if you have trouble solving them, then you may want to give yourself more time to prepare.

# Coding prep resources

- HackerRank
- CodingBat
- LeetCode
- CheckiO
- Python for Everyone Course
- Python Data Structures Course
- Scala Cheat Sheet (if you've chosen Scala as your programming language):
  - Please keep in mind that the coding challenge in Scala will have nothing to do with Scala from a Spark construct, so you'll have to be proficient in Scala as a pure functional programming language.

# SQL prep resources

• Advanced SQL Interview Questions and Answers

Thanks for taking the time to review this guide and good luck in the interview - you'll do great!