40 Tesla Interview Questions

Since its inception, Tesla has been in the limelight for being a revolutionary, innovative company. While this makes for an extremely interesting and exciting workplace, Tesla's work culture is also quite challenging. Constantly working on creating new things can be a great learning opportunity for engineers.

Software engineers who are passionate about innovation and who thrive in fast-paced environments often have Tesla at the top of their "dream companies" list. If you are one of them, this article will help you in your endeavor of landing a job at Tesla. We'll cover:

1. What Is Unique About Tesla Interviews?
2. What Is the Interview Process at Tesla Like?
3. Skills Required for Cracking the Tesla Interview
4. Interview Questions at Tesla
5. How to Prepare for Tesla Interviews?
6. How to Stand Out in Tesla Interviews?
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What Is Unique About Tesla Interviews?

Constant Innovation: As a leading company of cutting-edge innovations, Tesla always works on advanced technologies. This drives as a motivational factor for employees knowing that they're going to provide innovative models. This reflects in their recruitment process as well. They look for candidates with innovative ideas.

Exclusive interview with the CEO, Elon Musk: If you make a great impression in the initial interview rounds, you might get a chance to speak to and impress Elon Musk. In the final round, Musk meets a few candidates or talks or speaks to them over the phone. (This might not apply to all roles.)

What Is the Interview Process at Tesla Like?

The Interview Process at Tesla consists of 4 rounds:

1. **Screening Round:** Recruiters have a preliminary conversation with you and discuss experience and accomplishments. This interview is to judge your technical skills. The recruiters usually screen **5-15 candidates per role** in this round.
2. **Interview With Hiring Manager:** If you're selected in the preliminary screening round, an interview will be conducted with the hiring manager for about **40-45 mins**. You'll deep dive into your professional background, and you'll be asked technical and cultural questions. The hiring manager also discusses topics like relocation and compensation.

3. **Onsite Interviews:** Once you clear the interview with the hiring manager, you'll have 3-5 onsite interviews. Few interviews would involve a panel of Tesla employees. You'll be asked technical and engineering questions.
4. **Impress Elon Musk:** Once you clear all these rounds, you'll move on to the final step, where you'll have an interview with the CEO himself, Elon Musk. Musk meets a few candidates in person or speaks over the phone, depending on the role you apply for. Candidates are also sometimes asked to write an essay detailing why they want to work at Tesla and why they should be hired.

Skills Required for Cracking the Tesla Interview

Tesla wants you to showcase your expertise in practice. They sometimes ask the candidates to assemble something or give a coding problem to solve. The company doesn't have any specific criteria to select the candidates, but they look for three traits: **being innovative, driven**, and a **team player**.

The employees should be willing to **experiment**, **test,** and **learn** things. It's ok to fail at something, but you need to learn from it and move on.

You also need to be very **good at problem-solving.** In a 2017 interview, Elon Musk said that there is one question he asks every candidate — *tell me about some of the most difficult problems you worked on and how you solved them.* He went on to say that candidates who have actually solved a problem will know exactly how they did it, including the tiniest of details.

The question is used to filter out real problem solvers from the ones who are posing. Therefore, make it a point to convincingly describe your experience of solving problems by backing it up with detailed facts.

Must Read: Why FAANG Companies Test for Problem Solving Skills in Their Interviews

Interview Questions at Tesla

At Tesla, you can expect a lot of coding questions that will test your problem-solving ability. The best way to prepare yourself is to solve common coding problems and come up with a pattern to help you solve any unseen problem.

In this section, we've covered some practice interview questions categorized by job profile.

Software Engineer Interview Questions at Tesla:

1. What happens when you search google.com on a search engine?
2. Find the shortest path between two Tesla chargers.
3. Write a command-line program to evaluate a set of equations like:
   a = b+2

     b = 3+5

     c = a+b

4. Write a problem to find the angle between the hours and minutes hand of a clock.
5. How do you address errors in your code?
6. How do you organize CSS files, and why do you prefer that approach?
7. What programming language do you use to program and why?
8. What is the process you follow to create a program from requirements gathering to delivery?
9. Describe a stack and explain two operations it performs.
10. If you're hired by Tesla, what proportion of the day will involve coding and other activities you'll perform when not coding?

Senior Software Engineer Interview Questions at Tesla:

1. What are the advantages of WebAPI?
2. What are the advantages of using C++ when developing software for autonomous vehicles?
3. Define Black Box Testing and White Box Testing and explain their differences.
4. Describe your understanding of Tesla's Software Development Life Cycle.
5. Which kind of approach do you prefer — a microservice approach or a monolithic approach?
6. What is your approach for doing Unit Testing for your peer's code?
7. What process do you follow to test and find the bugs in the application that you've developed?
8. What are some key requirements you need to consider when designing for Tesla autonomous Vehicles?
9. Which Operating System do you prefer that guides self-driving vehicles, such as Tesla Model 3?
10. What are the differences between blocking and non-blocking calls in Node.js?

Algorithm Engineer Interview Questions at Tesla:

1. Explain how insertion sort, quicksort, heap sort, and merge sort work.
2. What are the advantages of insertion sort, quicksort, heap sort, and merge sort? Discuss the best- and worst-case time and memory complexity.
3. How would you describe dynamic programming? How would you find the length of the longest common subsequence of elements in two arrays using this method?
4. What are Dijkstra and Prim Algorithms, and how do you implement them?
5. What is the Bellman-Ford Algorithm for finding single-source shortest paths? What are its advantages over Dijkstra?
6. You have a set of date intervals represented by StartDate and EndDate. How would you efficiently calculate the longest timespan covered by them? Explain the time complexity.
7. What is A*, and what are its implementation details?

8. Explain how divide-and-conquer algorithms work. Discuss a few examples where this approach can be used.
9. What are Red-Black Trees and B-Trees? Explain best use cases for each of them.
10. If you need to design a scheduler to schedule a set of tasks, where several tasks need to wait for some other tasks to complete, before running, what algorithm will you choose to design the scheduler? And explain how you can implement it.

Backend Engineer Interview Questions at Tesla

1. Given two classes and an interface, explain how to implement the interface.
2. Imagine you have a receipt from a retail store. Design a database schema to store all the details on the receipt. If you have coupons to manage, how would you change the database schema?
3. Explain the ER Diagram of a project you worked on earlier.
4. Explain Factory, Singleton Design Patterns.
5. Given an integer array **nums**, move all 0's to the end of the array while maintaining the relative order of the non-zero elements.
6. Given an array of strings **strs**, group the anagrams. Return the answer in any order.
7. What is a PATCH operation? How is it different from PUT?
8. What is the difference between design and architecture?
9. How would you find the most expensive queries in an application?
10. How would you deal with failures in a distributed system?

How to Prepare for Tesla Interviews?

Cracking the Tesla interview is very challenging. The kind of questions asked at Tesla are unique and require in-depth knowledge of the concepts. Interview Kickstart (IK) can help you to prepare for these taxing interviews. At IK, you'll get the unique opportunity to work with and practice mock interviews with tech leads and hiring managers from FAANG and other Tier-1 tech companies.

Want to know more? Sign up for our FREE webinar on How to Nail Tech Interviews.

Recommended Reading:
How Long Does It Take to Prepare for Coding Interviews?
Coding Interview Cheat Sheet for Software Engineers and Engineering Managers
Cracking the Coding Interview: 9 Extremely Important Things You Should Know

How to Stand Out in Tesla Interviews?

Tesla recruiters shared the following **key points** to keep in mind to land a job at the company:

1. There's No Formula

Recruiters say that they don't have a predefined formula for selecting candidates. Elon Musk is famous for his *first principles*, which means instead of figuring things out based on what happened before, *"you boil things down to the most fundamental truths ... And then reason up from there."* This is the thinking behind every innovation at Tesla.

2. Be Comfortable on the Spot

Recruiters expect people to show practical skills in whichever role they apply for. If you're applying for a factory role, you'll be asked to assemble something in front of them. If you're applying for tech roles, you'll be asked to demonstrate your skills on a whiteboard. So prepare yourself to be comfortable doing things instead of just "speaking" at the interview.

3. Demonstrate Potential

Tesla looks for people who demonstrate immense potential to grow and people with determination. You don't need to have a degree from a top university, but showcasing your skills might just show the right bit of determination.

4. Show Off Your Soft Skills

You don't need to have massive work experience to apply at Tesla. You can show off your relevant extracurricular activities to show that you're passionate enough to learn and a good team player. Tesla's Chief People Officer, Gaby Toledano, explains, *"We have candidates who participate in Formula SAE, solar club, or coding competitions, serve of boards, have written white papers, or are involved in sports or other things that show that the person is well-rounded, passionate, and a team player."*

5. Do Your Homework

Recruiters say that a candidate who stands out does their homework before the interview. They know what kind of problems they're trying to solve. For example, if someone's applying for a Sales position, they need to make sure they've visited a Tesla Store and discuss how they can improve a customer's experience.

FAQs on Tesla Interviews

Q. How long is the Tesla Hiring process?

A. Tesla's hiring process takes about two or three weeks on average.

Q. Can you apply for Tesla without a degree?

A. Yes. You can apply for Tesla without a formal degree. According to Elon Musk, your level of education or what school you went to do not matter — what matters is whether you have the skills needed for the

job. During a 2014 interview, Musk said, "There's no need even to have a college degree at all or even high school (to work at Tesla)."

(All information is based on research conducted at the time of writing. Speak to your recruiter to get the latest information.)