

Data Scientist interview checklist

Data scientist hiring usually runs as an online Python, SQL and statistics test or take-home modelling task, one or two technical rounds on machine learning and your projects, a business case round, and a final managerial and HR discussion.

10 QUESTIONS TO PRACTISE OUT LOUD

1. Explain the bias-variance trade-off with an example from a model you built.

What it checks: Whether you understand underfitting and overfitting at a conceptual level and can connect it to choices like model complexity and regularisation.

2. Tell me about a model you built that did not create the business value you expected.

What it checks: Whether you measure impact beyond model metrics and understand that adoption and action matter as much as accuracy.

3. Why do you want to move from data analytics into a data scientist role?

What it checks: Whether the move is backed by real modelling work and skills, not just a preference for a better title.

4. You are building a fraud detection model where only 0.5 percent of transactions are fraud. How do you handle the imbalance?

What it checks: Whether you know that accuracy is misleading on imbalanced data and can choose suitable metrics, sampling and threshold strategies.

5. Describe a time a stakeholder expected far more accuracy than the data could support.

What it checks: Whether you can manage expectations with evidence, explain uncertainty clearly and still deliver something useful.

6. Our data science team works closely with business teams in Mumbai. Would you relocate?

What it checks: Whether you are open to the location and working style the role needs, and whether any constraints will affect your joining.

7. For a loan default model, would you optimise for precision or recall?

What it checks: Whether you link evaluation metrics to the real business cost of each type of error, rather than quoting definitions only.

8. Tell me about working with engineers to put one of your models into production.

What it checks: Whether you can work beyond notebooks, collaborating on deployment, latency, monitoring and code quality with engineering teams.

9. What are your salary expectations as a data scientist, and what is your notice period?

What it checks: Whether your expectation is reasonable for your experience and the role, and whether your joining date fits their needs.

10. How do random forests and gradient boosting differ, and when would you choose each?

What it checks: Whether you understand how the two main ensemble methods work, not just their library names, and can reason about tuning and overfitting.

TIPS FOR THIS INTERVIEW

- Prepare to walk through one end-to-end project: problem framing, data, features, validation method, model choice, business impact and what you would do differently.
- Revise probability, hypothesis testing, confidence intervals and power, because statistics questions catch many candidates who focus only on algorithms.
- Practise writing clean Python with pandas and scikit-learn pipelines without notes, as many companies run live coding or take-home tasks.
- Be ready to explain how you avoid leakage and validate properly, since interviewers trust candidates who distrust their own high scores.

THE DAY BEFORE

- ☐ Confirm the time, venue or video link and the interviewer's name
- ☐ Plan your route and leave time for traffic, or test your camera, microphone and internet
- ☐ Keep copies of your resume, ID proof, certificates and photographs in a folder
- ☐ Iron your clothes and charge your phone and laptop
- ☐ Do one final run-through of your introduction, then stop and rest

ON THE DAY

- ☐ Arrive 15 minutes early, or log in 5–10 minutes early for a video call
- ☐ Greet everyone politely, including the receptionist or coordinator
- ☐ Listen to the full question, pause, then answer in a clear structure
- ☐ Take brief notes of names and key points
- ☐ Ask your prepared questions and confirm the next steps before you leave