

163 Data Science Interview Questions

That Will Help You Get A Data Scientist Job.



Matt Dancho

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Chapter 1: What is the Data Science Hiring Process Looking for?

These questions are what people want to know before they **begin the hiring data science process**. Finding a program that can help you succeed at each of these will increase your confidence and give you a plan for success.

What are companies looking for in a candidate?

1. Who creates the job descriptions for data scientist roles?
2. What should we do if data science roles are unrealistic?
3. What is more important: depth of knowledge (technical ability) or breadth of knowledge (domain expertise)?
4. How much real-world experience is required to become a data scientist?
5. Do I need to be the best coder?
6. Do I need a degree?
7. What is needed for an entry-level position?
8. What are the minimum years of experience required for an entry level data science position?
9. How much professional coding experience is required?

R vs Python: Which is better?

10. R versus Python: Which increases the chances of getting hired?
11. Can I find a job if I know R and not Python?
12. Is the data science hiring process often biased towards a favor of a particular programming language?

Which Skills and Certifications are Important?

13. Which skills are needed?
14. How much coding experience is required to be a data scientist?
15. Which certifications are the best door openers?
16. How much math do I need to know?
17. Which software is positioned at the top of the data science field?
18. What technologies are required for data science jobs?
19. Do data scientists need to know data structures?
20. What soft skills are required?
21. What technical skills / knowledge do I need?
22. Are math and statistics skills needed?
23. How much coding vs math knowledge is needed?
24. Are SQL, Python or R skills needed to become a data scientist?
25. What about BI Tools like Tableau, Looker, PowerBI?
26. Is domain knowledge required?
27. How much experience in MLOps?
28. Do I need a computer science background?

What is the Hiring Process Like?

- 29. Is there a standardized process for hiring data scientists?
- 30. How are data science candidate's skills assessed?
- 31. Are the qualifications based on a portfolio of projects or academic qualifications?
- 32. How heavily is industry experience weighed in the hiring decisions?
- 33. What is the best strategy to succeed in the hiring process?
- 34. How to deal with knowledge gaps in the hiring process?
- 35. Does the hiring process typically involve a coding test?
- 36. What is the difference in the hiring process between Fortune 500 versus a smaller company or non-profit?
- 37. If a certain skill set is missing, will the company provide proper training?

How to begin or transition into data science?

- 38. How do those seeking to transition into data science from other fields make the career transition?
- 39. How to transition from data analyst to data scientist?
- 40. How to get started with zero experience?
- 41. How to avoid imposter syndrome (feeling like you don't belong or are not a real data scientist)?
- 42. How do data scientists (55+) overcome ageism in the hiring process?
- 43. How to overcome nationality or country-specific boundaries in the international hiring process?
- 44. How do I transition from quantitative analyst to data scientist?
- 45. How do I transition from manager to data scientist?
- 46. How do I build credibility when changing a career?

Chapter 2: How to Compete for Data Science Positions?

The goal is to become a Top 5 candidate out of 1000 applicants - **The top 5 candidates get interviews.** How do you do this? A good data science program will help you compete against other candidates and give you an unfair advantage.

What does a successful Data Science Candidate look like?

- 47. What do I have to do to get an interview?
- 48. How to compete versus someone that has a data science degree?
- 49. Why should an employer hire someone without a degree?
- 50. What data science profile normally gets rejected?
- 51. What data science profile normally gets accepted?
- 52. How many projects have you done in your previous job or school?
- 53. What is the most important determinant factor of getting an offer: Education, resume, website, portfolio, personality, etc?
- 54. What organizational savvy / people-skills do I need to get data science jobs?

How to create a Data Science Portfolio?

- 55. How important is the data science portfolio?
- 56. What is the best channel to showcase work (e.g. github, website, etc)?
- 57. What does a good portfolio look like?
- 58. How to create a good portfolio project?
- 59. What projects should or should not be included in a portfolio?
- 60. How do I create a portfolio?
- 61. How do I create a professional website?
- 62. How do I make portfolio projects that companies need?
- 63. How do companies evaluate past projects?
- 64. How can I build a portfolio if I don't currently work in Data Science?
- 65. Do data science projects need to be unique or can I just copy from websites (e.g. Kaggle, etc)?
- 66. How do I showcase work without sharing proprietary information / code from my company?

How to search for Data Science Jobs?

- 67. What is the best way to start looking for data science jobs?
- 68. How do I prevent wasting time during the data science job hunt?

What is the Data Science Candidate Screening process like?

- 69. Why don't I get calls for interviews?
- 70. What does the candidate screening process entail?

- 71. What challenges will I face when switching careers from outside of data science to get past the screening process?
- 72. How do I make an attention-grabbing resume?
- 73. How do I make an attention-grabbing LinkedIn Profile?
- 74. How should my resume be structured to pass the candidate screening for data science jobs?
- 75. How do I write my resume or cover letter to get an interview?
- 76. How do I cover-up my resume if I have limited or no actual data science experience?
- 77. How do I cover-up my resume if I have a gap in employment?
- 78. Is it important to specialize my profile? (Examples: NLP or some specific-area like Time Series)
- 79. How can I pass screening even if I have no relevant experience?

How do I stand out from other candidates?

- 80. What skills will make you stand out from other applicants?
- 81. What will separate me from someone else that has just graduated from a data science program?
- 82. What technical skills will make you stand out from other candidates?

Chapter 3: What are the most common Data Science Interview Questions?

Answering these questions will help you prepare for and **ace the data science interview**. A good data science program will set you up for success in each phase of these questions.

How to explain your project experience?

83. Can you take us through some of your projects and what value they have added?
84. Show me what you have done.
85. What types of projects have you done that are not part of Kaggle?
86. Do you have a proven track record to apply advanced analytics techniques like data mining, predictive analytics, statistical methods, and machine learning?
87. Please list your data science project experience.
88. What projects have you successfully implemented?
89. How do I properly leverage hobbies / side-projects which can be more complex versus what has been done for previous employers that often enforce / limit to certain methods and technologies?
90. How do I explain the value of my projects for the business?
91. How much “hands-on” experience do you have on data science projects?
92. What’s so special about the data science projects you’ve done?

How to avoid common interview traps

93. What do I do when I’m stumped by an interview question?
94. Why do you think you are a good data scientist?
95. Why do you think you are a good fit for us?
96. Why should we hire you as a data scientist?
97. What if I’m worried about not having sufficient skills? How do I compensate for this?
98. How to answer questions if you didn’t go to college or get a degree specifically in Data Science?
99. What if companies ask for prior experience and I have none?
100. What if a company asks me if I know Python/SQL and I only know R?
101. If I code predominantly in R, and the employer wants Python specifically, what is the best way to communicate the transferable elements?
102. How do we convince interviewers that tools don’t matter, and that I should be considered even though I know R and the others all know Python?
103. How do I show my soft-skills but also appear confident and a nice person?
104. Do you have a solid statistical background?
105. Why do you want to work for us?
106. What is your motivation to be part of our team?
107. How proficient are you in a coding language?
108. How do you plan to solve our data problems without any real-life experience?

How to answer technical questions

109. How important is knowing data structures and algorithms?
110. Explain all of the XGBoost hyperparameters

- 111. Explain reinforcement learning
- 112. Explain a GLM
- 113. Explain a Random Forest
- 114. Explain a Decision Tree
- 115. Explain K-means
- 116. Explain PCA to a non-statistician
- 117. What data cleaning techniques have you used in the past?
- 118. How do you deploy models into production?
- 119. What is the problem when $P \gg N$?
- 120. Explain the tradeoff between predictive power and interpretability of the model (and why this matters)
- 121. What is bias and variance?
- 122. What factors make the model predict the way it does?

Live coding, exams and take-home tests

- 123. Will I need to pass a live coding test?
- 124. What practical skills am I likely to have to demonstrate?
- 125. How do I approach coding exercises during interviews?
- 126. How do I prepare for live coding exams?
- 127. How do I prepare for take-home tests?
- 128. What hacks can I use to pass the take-home test?
- 129. What code snippets can I prepare to quickly adapt to showcase an assignment on any data given by the company?
- 130. Many companies make you sit through HackerRank and live coding like Leetcode. How to pass these tests?

How to present business value in an interview

- 131. How can you help our business?
- 132. How do I present my insights to business people who are not technical?
- 133. Provide tangible examples of how you can use data science to solve a business problem
- 134. Which machine learning algorithms have you used and what financial results can you achieve with them?
- 135. How do I explain my outcome to a non-technical person?
- 136. How do you transfer insights into real world results?
- 137. How do you change management's perception from old world to new world thinking?
- 138. How do you explain machine learning and deep learning results in layman's terms so you can successfully communicate with the Business?
- 139. How to make the business feel confident with machine learning and AI?
- 140. How do you know you have addressed the problem?
- 141. How do you manage stakeholders?

Chapter 4: How to negotiate

Once you pass the interview and obtain a job offer, next you need to **negotiate with your future employer**. A good program will set you up for success teaching you how to obtain multiple offers and pit the competition against each other to increase your salary and benefits.

How to negotiate your salary & benefits

- 142. What do I say regarding my expected salary?
- 143. How do I determine my value as a Data Scientist based on my skill set and experience in order to find an acceptable salary (balance between the most money and not pricing myself out of the job)?
- 144. What is the salary range?
- 145. How do I negotiate my salary?
- 146. How do I negotiate vacation?
- 147. How do I investigate benefits?
- 148. How do you know if the company is open to negotiating the salary?

How do I make sure the organization is a good fit for me

- 149. How do I pick the best job for me (Not just looking at the job and salary but also the company, team and culture)?
- 150. How do I make sure the hiring company is ready for a data science practice?
- 151. How do I tell if the company has a data quality practice?
- 152. What does the organizational structure look like?
- 153. How do I investigate the team that is being hired?
- 154. How do I identify if the company is asking for a data scientist but they really need a data engineer?
- 155. What role do companies really need (e.g. Business Intelligence, Data Analyst, Data Scientist, Data Engineer, all of them) compared to what they are asking for (ie. Data Scientist)?
- 156. Does the employer have the right infrastructure to support the Data Scientist position?
- 157. What resources will the employer provide to maintain and upgrade their data scientist's skills: Books, study groups, paid certifications, tuition reimbursement?
- 158. What computational resources will they give the data scientist? A 15-year old PC or state of the art CPU/GPUs, or unlimited cloud computing?
- 159. Will I have time to improve my knowledge after being hired?

What is the data science career path at the company?

- 160. What is the data science career path at your future employer?
- 161. How long can the data science career be?
- 162. How long will it take to become a Senior or Lead Data Scientist?
- 163. What's the difference between management and the Technical career path?

What are your next steps?

The next question is, *“How do you learn the skills to land a data science career?”*

My name is Matt Dancho, and I turn business people, data enthusiasts, and people that have an obsession with data science into elite data scientists.

I'd love to show you your next steps. If you want to see them then click the button below...



Show Me