

Data Science Career Track Student Interview Guide (Project Walkthrough)

Student Version April 2021

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Mock Interview Overview

The project walkthrough interview is perhaps one of the most common, yet important interviews for data scientists, especially for those who have just graduated with a related degree, or for candidates that are switching fields without much work experience in the field. Projects make up a critical component of a data scientist's portfolio. Candidates must back up their projects with the right level of breadth and depth and articulate and present their thoughts clearly.

The project walkthrough interview is a 60-minute interview that requires you to present your project details, articulate your thoughts, and answer necessary interviewer questions.

Mock Interview Format & Grading Criteria

The 60-minute project walkthrough interview focuses on both project presentation and technical depth and understanding of the overall data science lifecycle in relation to your project.

You should ideally focus on one end-to-end major project. However, if your project doesn't involve critical steps in the data science lifecycle (e.g machine learning, experimentation, and hypothesis testing), you can choose another project that covers these steps.

Interview Format:

The structure of the 60-minute interview has the following breakdown:

Topic	Time Allocated
Introduction & Interview Expectations	5 minutes
Project Presentation & Walkthrough	35 minutes
Follow-up Questions	10 minutes
Feedback and Conclusion	10 Minutes

Introductions & Interview Expectations: 5 mins

This will be a short introduction where the Mock Interviewer introduces themselves to you and provides an overview of the structure of the project walkthrough interview. This will set the expectations of the interview, and there will be time for you to ask any questions before starting the interview. The Mock Interviewer will also check to ensure that you are able to share your screen before formally commencing the interview.

Project Presentation & Walkthrough: 35 mins

For this segment of the interview, you will be instructed to open up your project presentation (deck) and walk through the project. Do plan to spend close to 35 minutes talking about each step of your project in detail as you are presenting your project. Remember not to just read through the slides but actually engage in a conversation with the interviewer as if they were your supervisor for the project.

For projects involving deep learning, computer vision, or natural language processing, there may not be a lot of EDA or visually pleasing slides, so plan to focus more on the technical aspects of the project.

Follow-up Questions: 10 mins

For this segment of the interview, the interviewer could choose to go deeper by questioning the technical decisions you made for your project. They may also ask about the key insights and recommendations from your learnings. The interviewer may also pose some alternate scenario-based questions.

Feedback and Conclusion: 10 mins

Typically, the interviewer will spend the last **10 minutes** giving you necessary feedback on your project walkthrough.

Grading Criteria and Rubric

The mock interview will be graded on a **4-level scale** split across key criteria that check for professional data scientist competencies in line with business hireability and market expectations. The grading criteria is:

- Level 1: Not yet meeting expectations
- Level 2: Approaching expectations
- Level 3: Meeting expectations
- Level 4: Exceeding expectations

Project Walkthrough Rubric:

The final decision for each technical interview is an accumulation of your performance for each of the following topics:

Grading Criteria	Not yet meeting expectations	Approaching expectations	Meeting expectations	Exceeding expectations
Presentation Skills	1	2	3	4
Project Understanding	1	2	3	4
Technical Depth	1	2	3	4

Total Score:

Fail (score<=7)		Pass (Score>7)	
Level 1: Not yet meeting expectations	Level 2: Approaching expectations	Level 3: Meeting expectations	Level 4: Exceeding expectations
3-5	6-7	8-10	11-12

Special Case: If you score "Not yet meeting expectations" (score = 1) in ANY of the sections, you will automatically fail the project walkthrough interview.

This score would indicate that you:

- Cannot structure and articulate your thoughts and walkthrough your project OR
- Showcase below-par understanding of the overall data science lifecycle relevant to your project OR
- Lack the necessary technical rigor and depth concerning approaches and methodologies used in your solution approach.

Project Understanding:

This part of the interview grade typically evaluates your ability to clearly explain and articulate the following major phases of the data science lifecycle within your project:

- 1. Problem Formulation
- 2. Data Understanding and Cleaning
- 3. Exploratory Data Analysis
- 4. Advanced Analytics and Insights
- 5. Findings and Recommendations

Note: This flow has been generalized from the data science method considering the wide variety of capstone projects typically encountered. You can make use of the following mapping between the DSM and the above workflow in case you want to get a better understanding.

Data Science Method	Project Understanding Phases
Problem Identification	Problem Formulation
Data Understanding and Cleaning	Data Wrangling
Exploratory Data Analysis	Exploratory Data Analysis
Pre-processing and Training Data Development Modeling	Advanced Analytics and Insights
Documentation	Findings and Recommendations

Technical Depth: This evaluation should gauge your competency regarding techniques and approaches used to solve the problem and your ability to explain the reasoning behind their choices. A good candidate should clearly explain the what, how, and why of their project in terms of technical solutions.