

# 21-Day Meta Data Science Analytical Interview Preparation Plan

This is an intensive 21-day study plan to help you ace your Meta Data Science Analytical interview. Adjust the pace as needed based on your current skill level and available time.

## Week 1: Foundational Knowledge and SQL

Day	Topic	Activity	Resources
1	Intro & Probability	Review probability basics: independent/dependent events, conditional probability, Bayes' Theorem.	Khan Academy Statistics & Probability
2	Probability Distributions	Study normal, binomial, Poisson distributions. Understand their characteristics and applications. Do practice problems.	Khan Academy, StatQuest YouTube
3	Descriptive Statistics & Hypothesis Testing	Review descriptive stats (mean, median, mode, variance, standard deviation). Learn hypothesis testing: null/alternative, p-values, confidence intervals, Type I/II errors.	OpenIntro Statistics, StatQuest YouTube
4	SQL Fundamentals	Practice basic SQL: SELECT, FROM, WHERE, GROUP BY, HAVING, ORDER BY. Work through interactive tutorials.	SQLZoo, SQLBolt, DataLemur
5	SQL Joins & Aggregations	Master different types of joins (INNER, LEFT, RIGHT, FULL) and aggregate functions (COUNT, SUM, AVG, MIN, MAX).	SQLZoo, HackerRank SQL
6	SQL Practice (Intermediate)	Solve more challenging SQL problems involving joins, aggregations, and subqueries. Focus on business-related scenarios.	HackerRank SQL, LeetCode Database, StrataScratch
7	SQL Window Functions	Learn about window functions (ROW_NUMBER, RANK, DENSE_RANK, LAG, LEAD, NTILE) and practice using them to solve problems.	StrataScratch, Mode Analytics, Leetcode discuss posts, Window Functions section in PostgreSQL Tutorial (if using PostgreSQL)

## Week 2: Statistics, Case Studies, and Product Sense

Day	Topic	Activity	Resources
8	Regression Analysis & Experimental Design	Study linear and logistic regression. Understand experimental design principles: randomization, control groups, sample size, confounding variables.	"An Introduction to Statistical Learning," OpenIntro Statistics
9	Case Study Practice	Work through a data analysis case study. Focus on framing the problem, defining metrics, generating hypotheses, and analyzing data.	Do a search in your browser for "data science case study" or "data analyst case study".
10	Case Study Practice & Review	Analyze another case study, focusing on communicating your findings and recommendations clearly and	Do a search in your browser for "data science case study" or "data analyst case study".

Day	Topic	Activity	Resources
11	Product Sense - Day 1	<p>concisely. Review solutions and identify areas for improvement.</p> <p>Read about product development frameworks (e.g., AARRR, HEART). Analyze successful products and identify their key metrics. Start practicing answering product sense questions aloud.</p>	Harvard Business Review articles, MIT Sloan Management Review articles
12	Product Sense - Day 2	<p>Continue practicing product sense questions. Focus on defining metrics, identifying user needs, and understanding the competitive landscape.</p>	See links in Day 11.
13	A/B Testing	<p>Deep dive into A/B testing: sample size calculation, statistical significance, power, interpreting results, common pitfalls.</p>	Udacity A/B Testing Course, "Trustworthy Online Controlled Experiments" book
14	Network Effects & Experimentation	<p>Understand how network effects impact experimentation in social networks. Learn about mitigation strategies (cluster randomization, egocentric network design).</p>	Research Articles, Company Blogs, Start with "Experimentation in a Networked World" by Sinan Aral, available at SSRN: <a href="https://ssrn.com/abstract=3031976">https://ssrn.com/abstract=3031976</a>

## Week 3: Behavioral, Review, and Mock Interviews

Day	Topic	Activity	Resources
15	Behavioral Interview Prep	<p>Prepare stories using the STAR method for common behavioral interview questions. Focus on Meta's values (Move Fast, Be Bold, Be Open, Focus on Impact).</p>	Create a document with common behavioral interview questions and add in your answers using the STAR method
16	Behavioral Interview Practice	<p>Practice answering behavioral questions aloud.</p> <p>Record yourself and identify areas for improvement in your delivery and content.</p>	Continue to utilize the document you created on Day 15.
17	Python/R for Data Analysis	<p>Review Pandas/dplyr for data manipulation.</p> <p>Practice cleaning, transforming, and aggregating data. Work through problems on HackerRank or LeetCode (Database section).</p>	HackerRank, LeetCode, Python Data Science Handbook
18	Review & Consolidate	<p>Review all the topics covered in the past two weeks. Identify areas where you feel less confident and revisit those topics.</p>	Review this handbook and all the notes you have been taking.
19	Mock Interview 1 (Technical)	<p>Conduct a mock technical interview with a friend, on a platform like Pramp, or record yourself. Focus on SQL and data manipulation skills. Get feedback and identify areas for improvement.</p>	Pramp, <a href="https://www.interviewing.io">Interviewing.io</a> , or record yourself
20	Mock Interview 2 (Case Study)	<p>Conduct a mock case study interview. Focus on framing the problem, generating hypotheses, analyzing data, and communicating your findings.</p>	Pramp, <a href="https://www.interviewing.io">Interviewing.io</a> , or record yourself
21	Mock Interview 3 (Product)	<p>Conduct a mock product sense interview. Focus on defining metrics, understanding user needs, and</p>	Pramp, <a href="https://www.interviewing.io">Interviewing.io</a> , or record yourself

Day Topic	Activity	Resources
Sense)	proposing data-driven product improvements.	

### Important Notes:

- **Consistency is Key:** Dedicate time each day, even if it's just for an hour or two. Consistent effort is more effective than cramming.
- **Active Learning:** Don't just passively read. Actively engage with the material by doing practice problems, writing code, and explaining concepts aloud.
- **Seek Feedback:** Get feedback on your mock interviews and practice problems whenever possible.
- **Stay Updated:** Keep an eye on Meta's official careers page and any interview preparation resources they provide.
- **Rest and Recharge:** Make sure to get enough rest and take breaks to avoid burnout.