

# Crush Your DS/ML Interviews: A Student's Roadmap

This handout is your 10-step guide to preparing for Data Science and Machine Learning interviews, with top resources hand-picked to help you learn, review, and practice efficiently. Start at the left, and work your way right or pick based on what you need most!

If you're new to interviews, begin with Python Basics and SQL. Then follow the sections in order.

## START HERE

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### Python

- a) [DataCamp Python Cheat Sheet](#)
- b) [UTC "Python for Data Science" PDF](#)

### SQL

- a) [SQL Interview Cheat Sheet](#)
- b) [Mode SQL Tutorial Interactive Lessons](#)

## Pandas Wrangling

- a) [DataCamp Pandas Cheat Sheet](#)
- b) [Kaggle Pandas Cheatsheet Notebook](#)

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## Statistics & Probability

- a) [MIT Statistics Cheat Sheet](#)
- b) [KDnuggets' 21 Data-Science Cheat Sheets \(Stats section\)](#)

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## ML Pipeline (scikit-learn)

[DataCamp Scikit-learn Cheat Sheet](#)

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## ML System Design

[ML System Design Interview Cheat Sheet](#)

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## Evaluation Metrics

[Stanford CS229 ML Metrics Cheat Sheet \(accuracy, F1, AUC,  \$R^2\$ , etc.\)](#)

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## EDA & Visualization

- a) [Datasans EDA Cheatsheet](#)
- b) [DataCamp Seaborn Cheat Sheet](#)

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## Mock Interview Reps

[Pramp / Exponent Data-Science Interview platform \(live peer practice\)](#)

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## Quick Tips & Common Pitfalls

- Practice solving problems out loud to simulate real interview conditions.
- Don't just read solutions but write and test your code from scratch.
- Focus on high-frequency SQL topics: JOIN, GROUP BY, WINDOW FUNCTIONS.
- Go through Leetcode's [SQL 50](#)
- Know how to compare models using metrics (Accuracy vs. F1,  $R^2$  vs. Adjusted  $R^2$ ).
- Prepare 2-3 STAR stories that show ownership, problem-solving, and teamwork.
- Be ready to explain trade-offs in model choice, feature selection, and data cleaning.
- Review a few end-to-end ML projects (Your own or others) as this helps answer system design questions.

## Behavioural (STAR)

[uConnect STAR Method Interview Cheat Sheet](#)

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