

Python Interview Questions for Data Analysts

1. Data Handling

- How do you read a CSV or Excel file in Python? Show an example using Pandas.

2. Data Cleaning

- How would you handle missing values in a dataset using Python?
- Difference between `dropna()` and `fillna()` in Pandas.

3. Data Selection & Filtering

- How do you filter rows in a Pandas DataFrame based on a condition?
- Difference between `.loc[]` and `.iloc[]`.

4. Aggregation & Grouping

- How do you group data by a column and calculate statistics like mean or sum?

5. Data Transformation

- How do you apply a function to a column in Pandas? Difference between `.apply()` and `.map()`.

6. Merging & Joining

- How do you merge two datasets in Pandas? Explain merge, join, and concat differences.

7. Data Visualization

- How do you create a bar chart or line plot using Matplotlib or Seaborn?

8. Working with Dates

- How do you handle and filter date/time data in Pandas?
- Difference between `datetime64` and `object` when storing dates.

9. NumPy Operations

- How is a NumPy array different from a Python list?
- How do you perform vectorized operations in NumPy?

10. Optimization & Efficiency

- What is vectorization in Python and why is it faster than using loops?