<https://www.datacamp.com/blog/top-python-pandas-interview-questions-and-answers>

<https://medium.com/@sandeepmaths04/top-16-seaborn-data-science-interview-questions-and-answers-cac64c25cb4d>

<https://www.interviewbit.com/pandas-interview-questions/>

### 🐼 ****Pandas Interview Questions****

#### ****Beginner****

What is Pandas? What are its key data structures?

Difference between Series and DataFrame.

How do you read a CSV file using Pandas?

How can you check for missing values in a DataFrame?

How do you filter rows based on a condition?

#### ****Intermediate****

Explain the difference between loc[] and iloc[].

What does df.apply() do?

How do you handle missing values (NaN) in Pandas?

How can you group data in Pandas?

What is the difference between merge(), join(), and concat()?

#### ****Advanced****

How do you optimize memory usage in a large Pandas DataFrame?

How to use Categorical data types effectively?

What are window functions in Pandas? Use case of rolling() and expanding().

How can you pivot or unpivot a DataFrame?

Explain how query() improves performance and readability.

### 🔢 ****NumPy Interview Questions****

#### ****Beginner****

What is NumPy? Why is it faster than Python lists?

Difference between array() and arange() functions.

How to create an identity matrix?

What are broadcasting rules in NumPy?

How do you calculate the mean, median, and standard deviation?

#### ****Intermediate****

How do you reshape a NumPy array?

What is the difference between ravel(), flatten(), and reshape()?

How do you stack arrays vertically and horizontally?

How to perform element-wise operations on arrays?

What is np.where() used for?

#### ****Advanced****

What are structured arrays in NumPy?

Difference between np.dot(), np.matmul(), and @ operator?

How to avoid unnecessary copying of data for performance?

How to use np.vectorize() and when should you avoid it?

How do you handle NaN in NumPy arrays?

### 📊 ****Matplotlib Interview Questions****

#### ****Beginner****

What is Matplotlib? What is pyplot?

How to create a simple line chart in Matplotlib?

How do you add labels, title, and legend to a plot?

What is the purpose of plt.subplot()?

How to save a plot as an image file?

#### ****Intermediate****

What are the differences between plot(), scatter(), bar(), and hist()?

How do you customize plot style, color, and markers?

How can you plot multiple plots in a single figure?

How to add annotations or text to a plot?

How do you change the figure size or resolution?

#### ****Advanced****

How do you create 3D plots in Matplotlib?

What are interactive plots and how to use %matplotlib notebook?

How can you embed plots in a web app (e.g., Flask)?

How to use object-oriented API instead of pyplot?

How to create custom colormaps?

### 🐱‍🏍 ****Seaborn Interview Questions****

#### ****Beginner****

What is Seaborn? How is it different from Matplotlib?

How do you load datasets in Seaborn?

What are the most common plot types in Seaborn?

How do you create a correlation heatmap?

What is the use of sns.set()?

#### ****Intermediate****

Explain the use of hue, style, and size in Seaborn plots.

How do you visualize distributions using Seaborn?

What is pairplot() and when should you use it?

Difference between catplot(), boxplot(), and violinplot().

How to customize themes in Seaborn?

#### ****Advanced****

How do you combine Seaborn and Matplotlib features?

How can you create multi-plot grids using FacetGrid or PairGrid?

What are Seaborn's regression plots and when to use them?

How do you work with time series data in Seaborn?

How to display statistical annotations (e.g., p-values)?