NumPy Complete Guide 1. NumPy Cheat Sheet **Array Creation**
- np.array()
- np.arange()
- np.linspace()
- np.zeros()
- np.ones()

Array Shape Operations
- arr.shape
- arr.reshape()
- arr.ravel()

Math Operations
- np.sum()
- np.mean()
- np.max()
- np.min()
- np.std()
- np.sqrt()

Random Numbers
- np.random.rand()
- np.random.randint()
- np.random.randn()

2. NumPy Notes (Beginner → Advanced) NumPy is a numerical library used for fast computation. It uses ndarrays which are faster and memory efficient. Covers: indexing, slicing, broadcasting, vectorization, linear algebra operations, aggregation, and performance tips.

3. Practice Questions (with answers) 1. Create a 1D array from 1 to 10
2. Create a 3x3 matrix of zeros
3. Find mean, max, min, std of an array
4. Reshape a 1D array into 2D
5. Generate 10 random integers

4. Interview Questions - What is NumPy?
- Difference between list and ndarray?
- What is broadcasting?
- What is vectorization?
- What is axis in NumPy?
- How to generate random numbers?