

Lesson 11: NumPy Basics

Data Science with Python – BSc Course

45 Minutes

After this lesson, you will be able to:

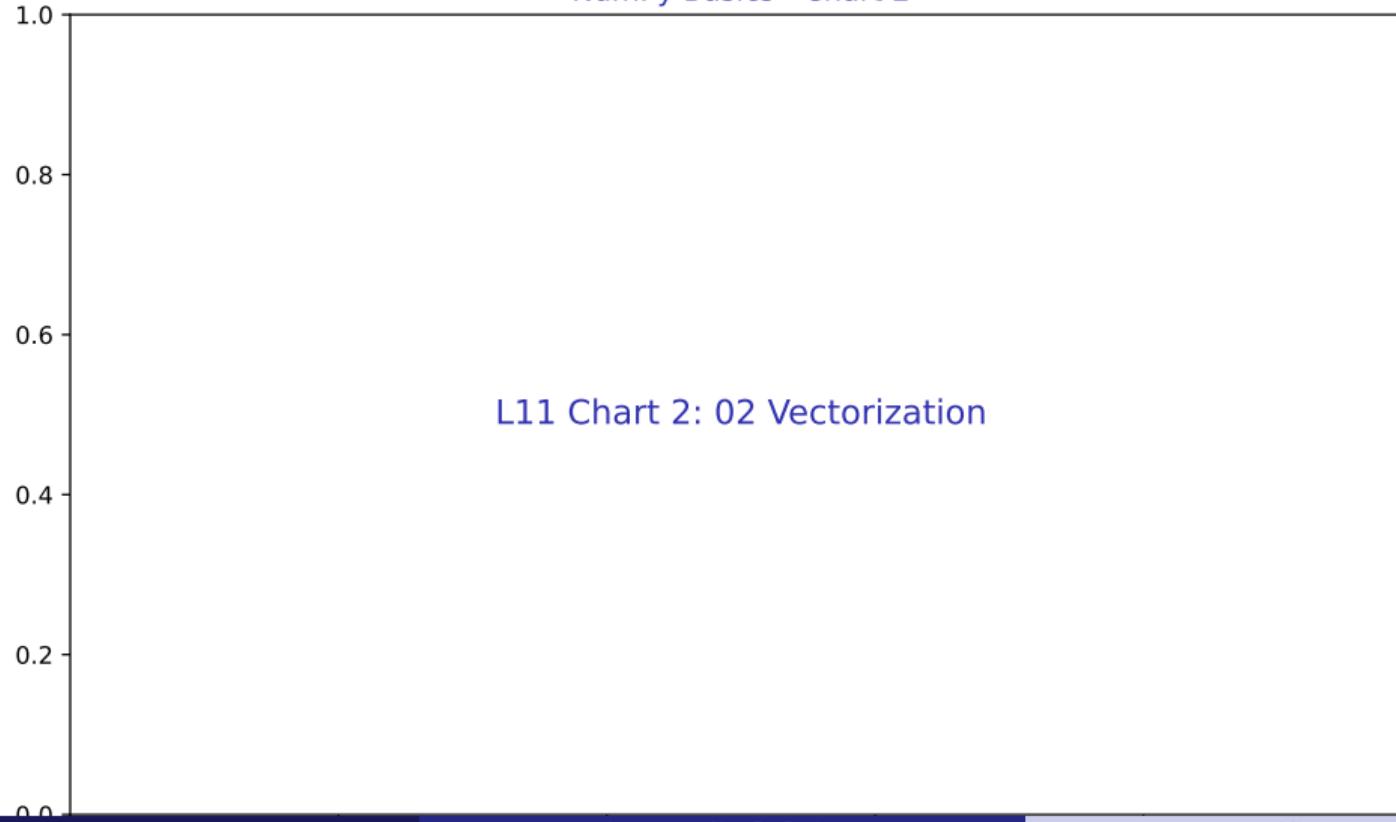
- Arrays vs lists
- Vectorized operations
- Broadcasting
- Mathematical functions
- Portfolio calculations

Finance application: Stock data processing and analysis

NumPy Basics - Chart 1

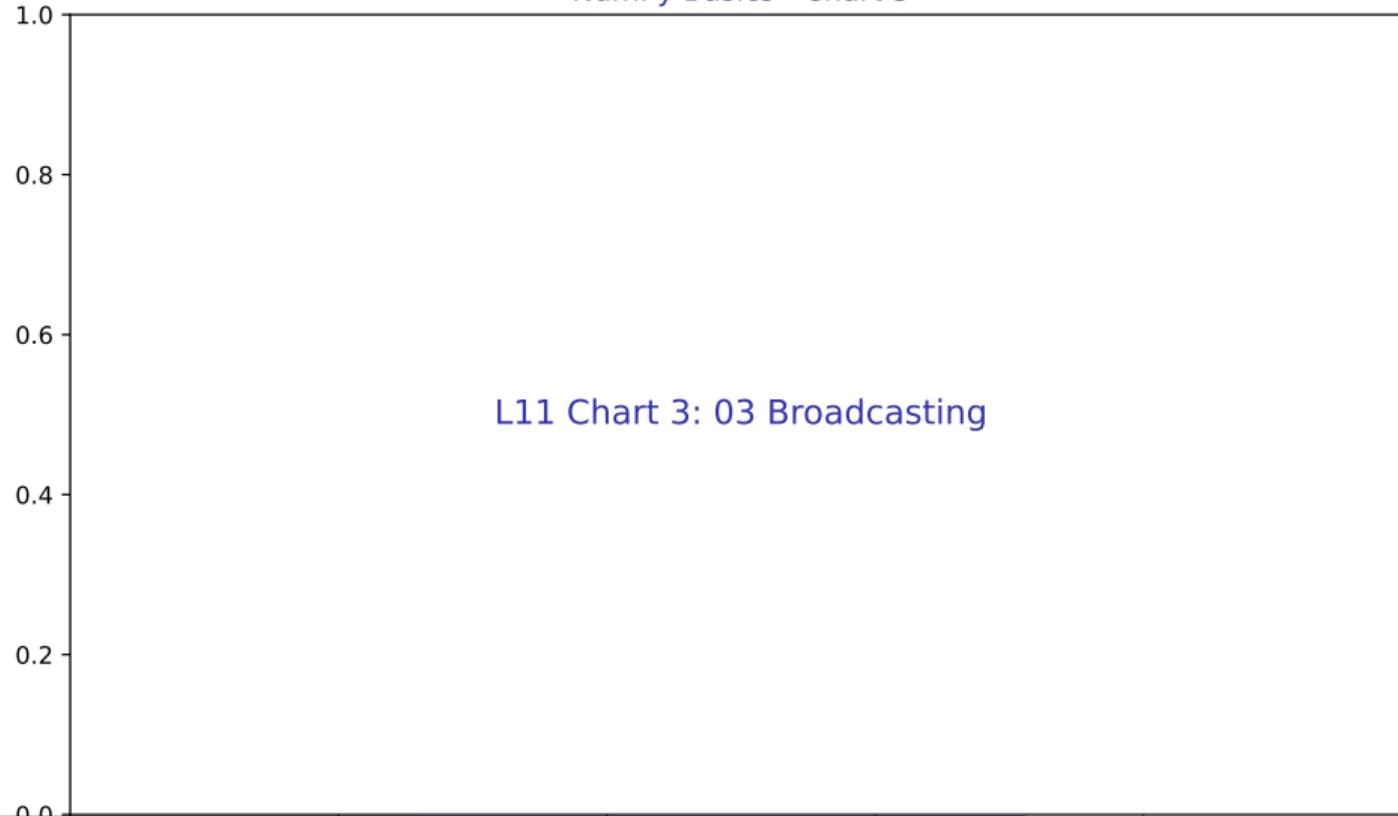


NumPy Basics - Chart 2



03 Broadcasting

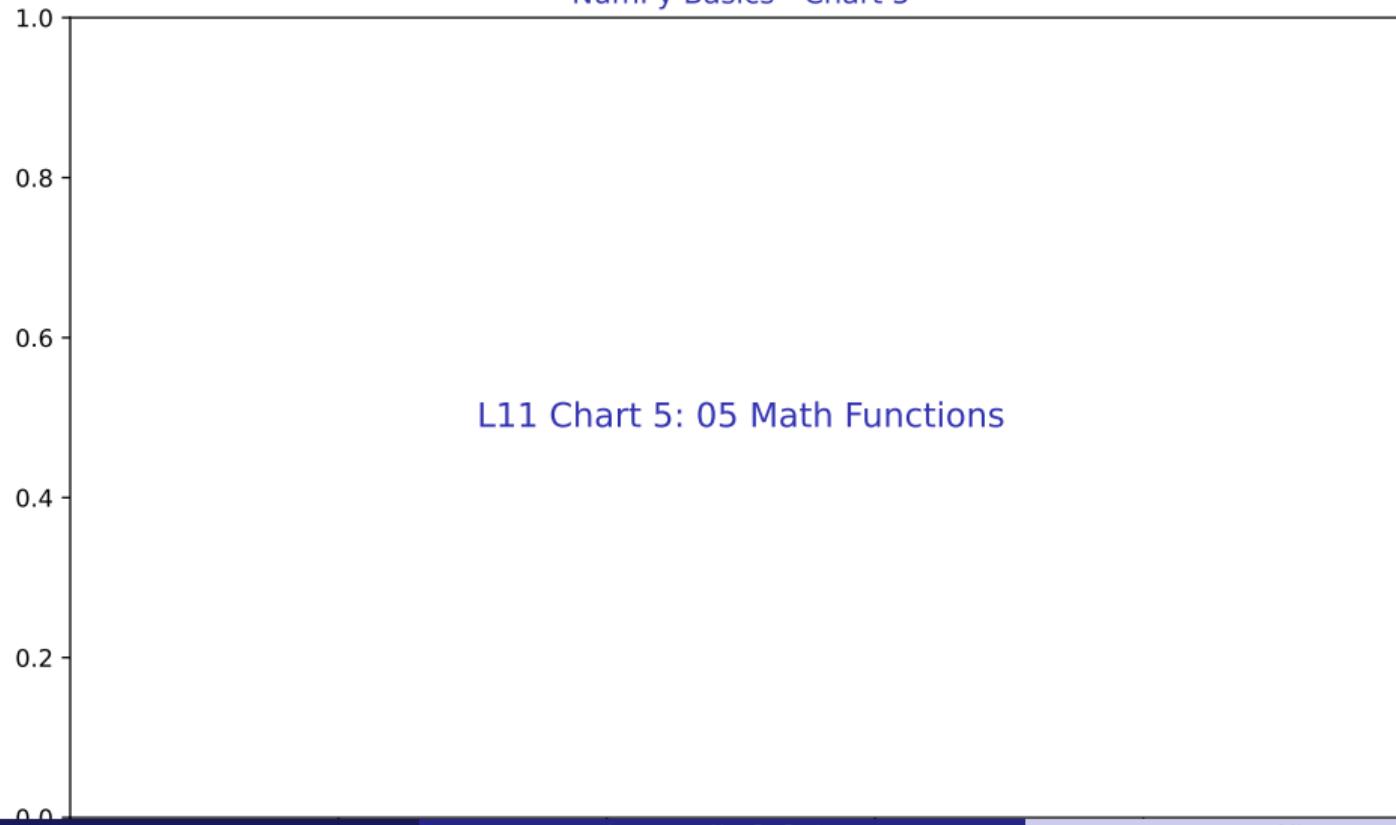
NumPy Basics - Chart 3



NumPy Basics - Chart 4

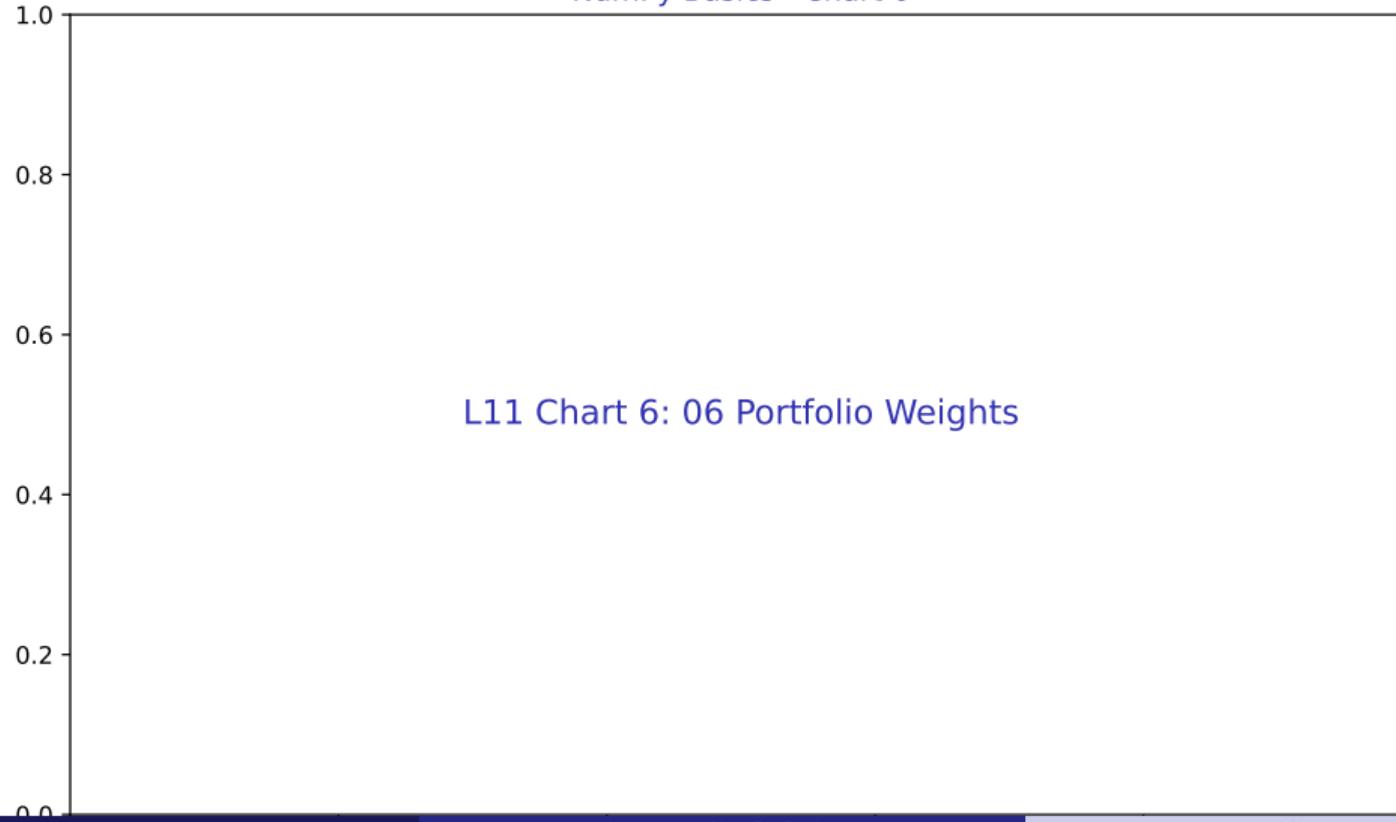


NumPy Basics - Chart 5

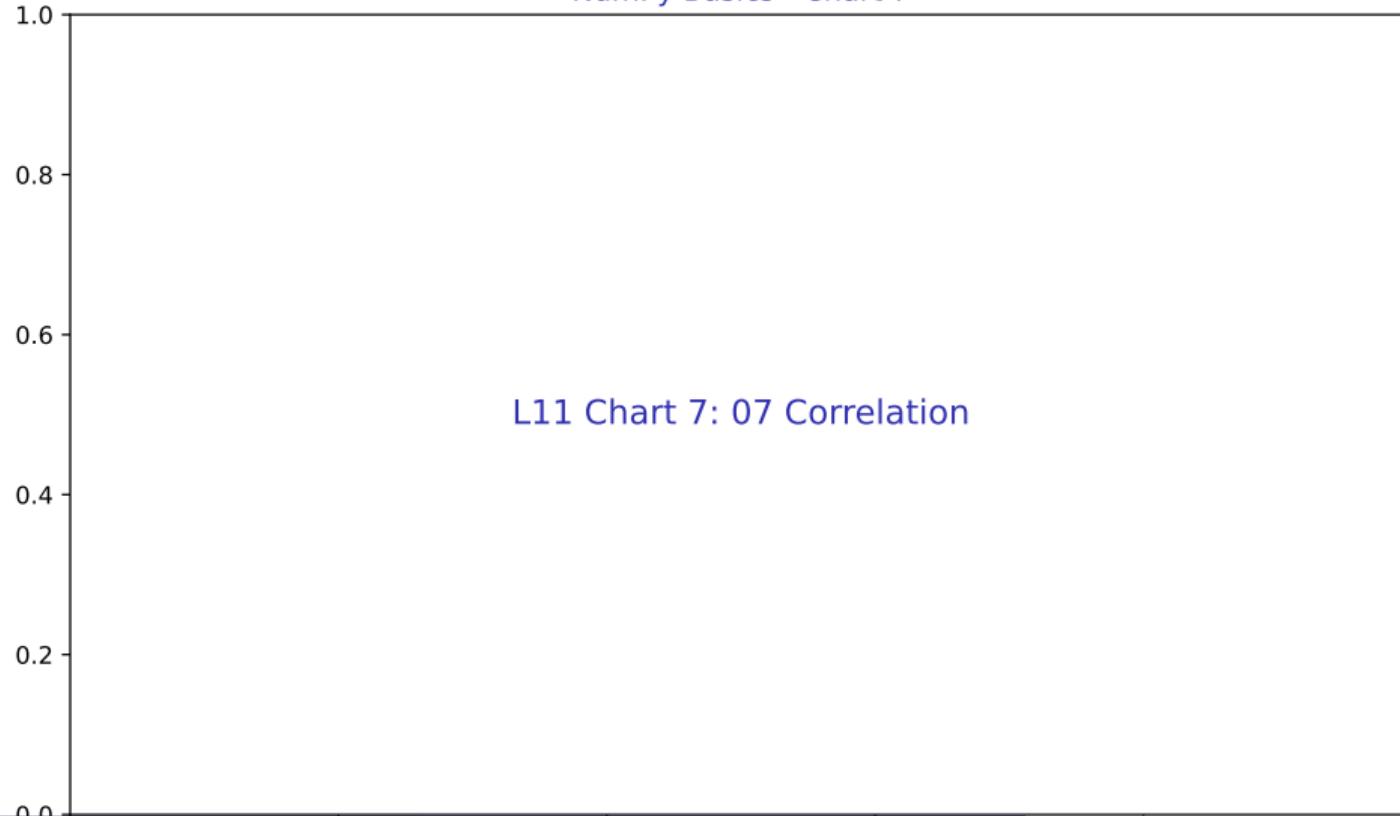


06 Portfolio Weights

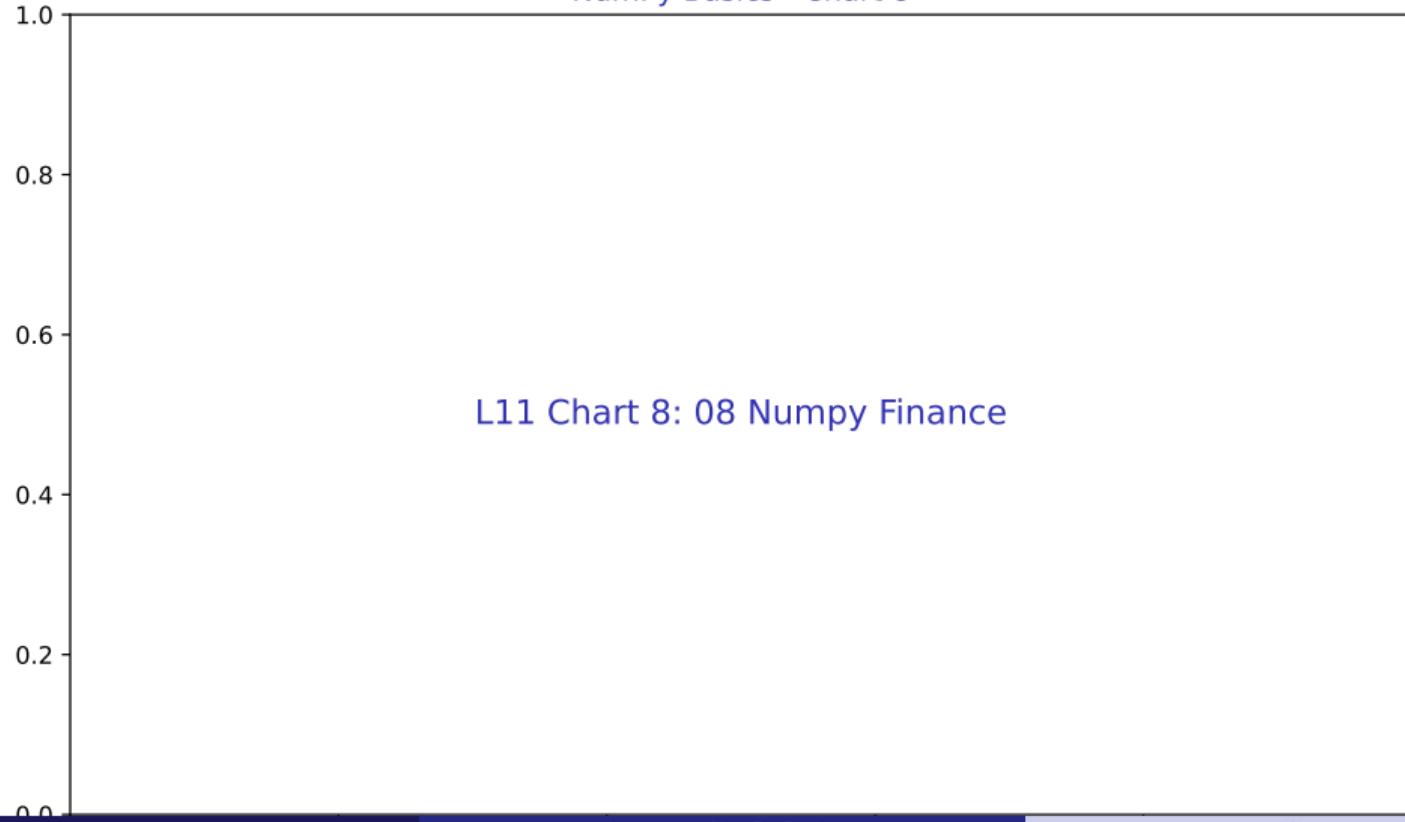
NumPy Basics - Chart 6



NumPy Basics - Chart 7



NumPy Basics - Chart 8



Key Takeaways:

- Arrays vs lists
- Vectorized operations
- Broadcasting
- Mathematical functions
- Portfolio calculations

Practice: Apply these concepts to the stock price dataset.