

Lesson 14: Probability Distributions

Data Science with Python – BSc Course

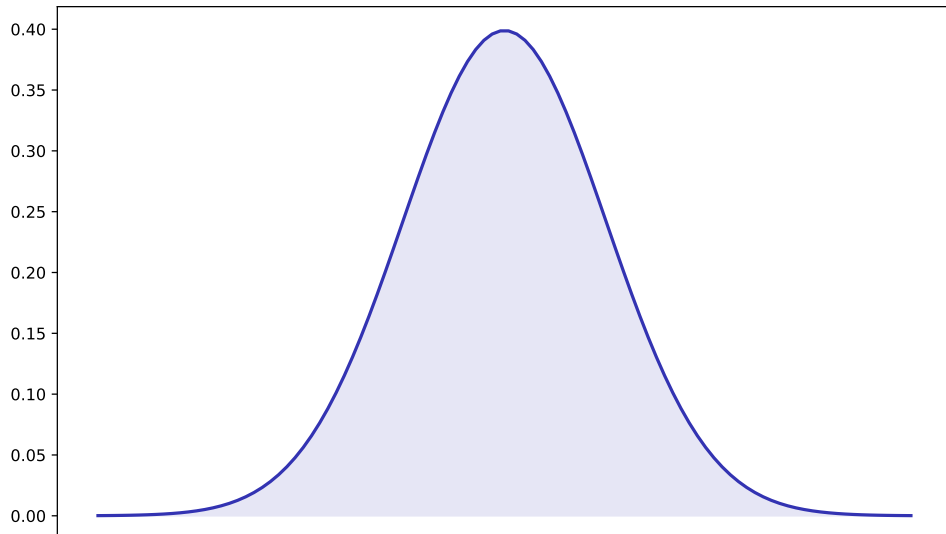
45 Minutes

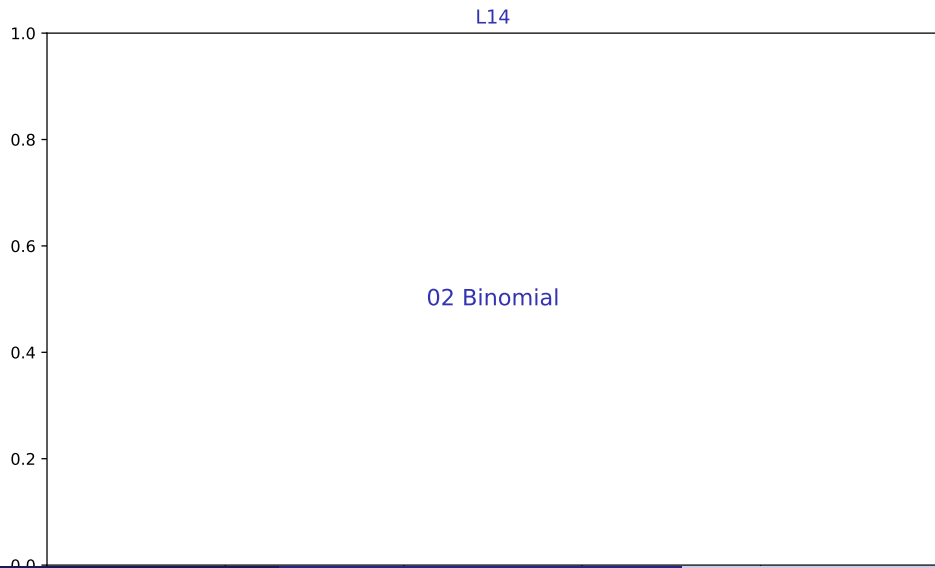
After this lesson, you will be able to:

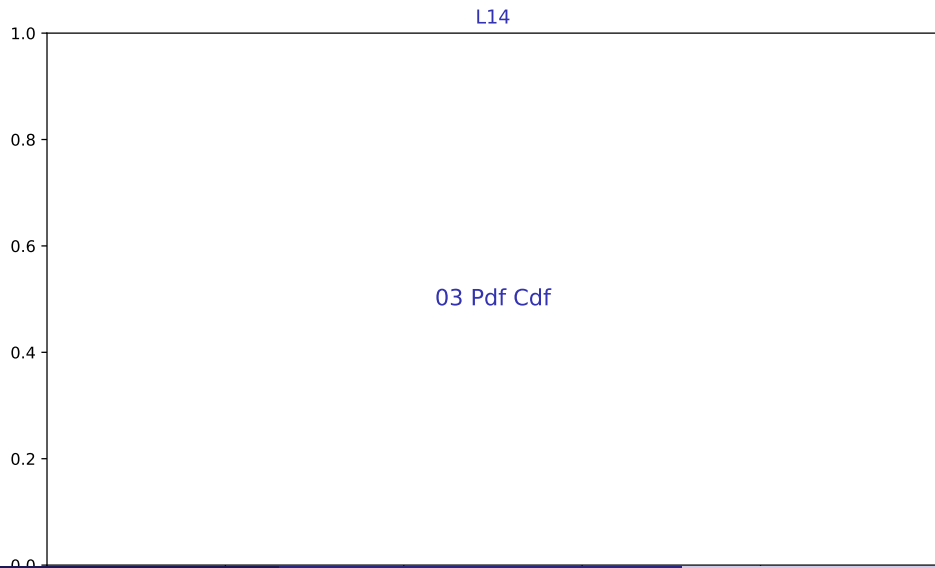
- Understand normal distribution properties
- Apply distributions to stock returns
- Use QQ-plots for normality testing
- Recognize fat tails in finance

Finance application: Statistical analysis of market data

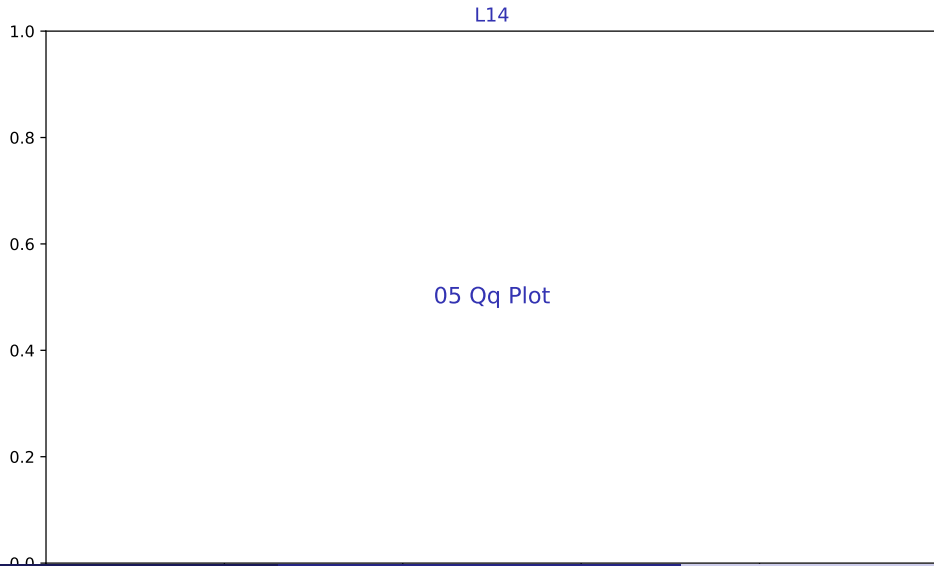
01 Normal Distribution

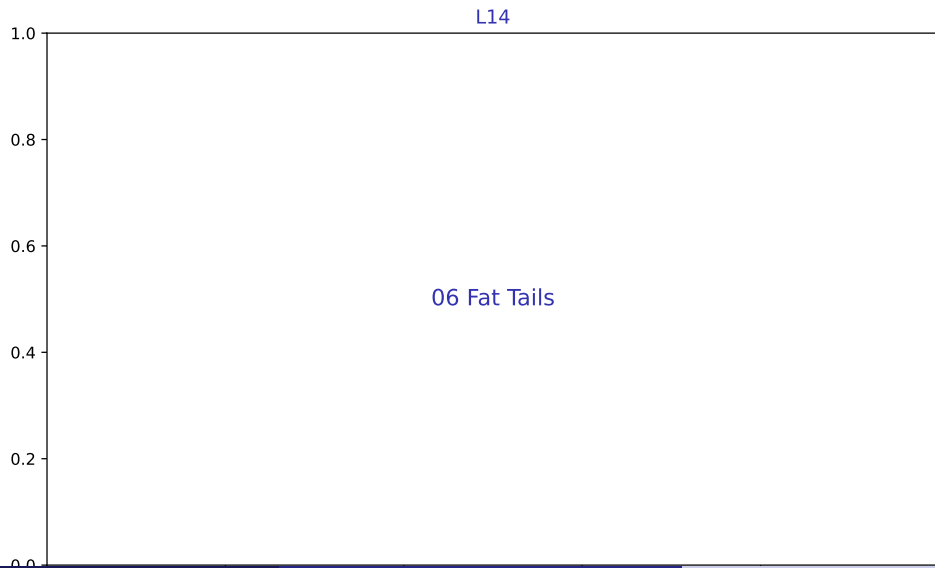




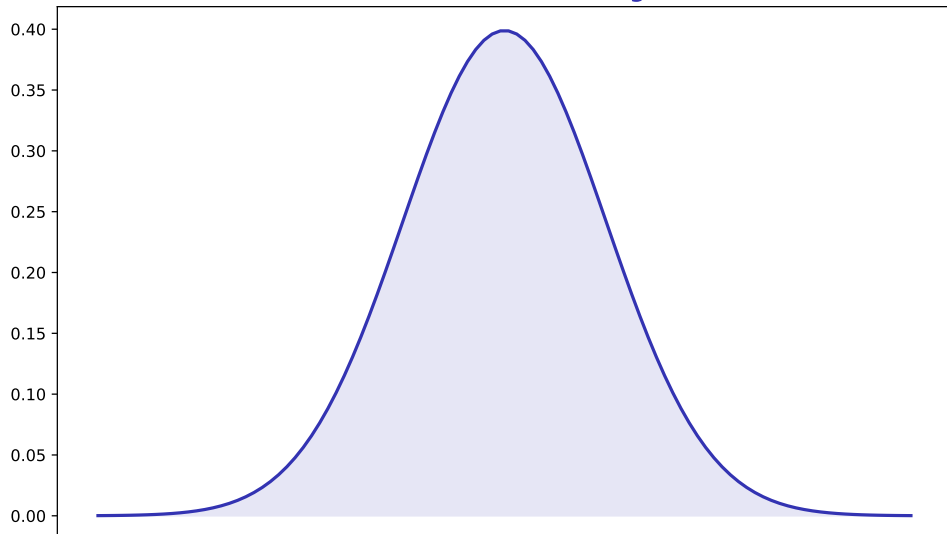




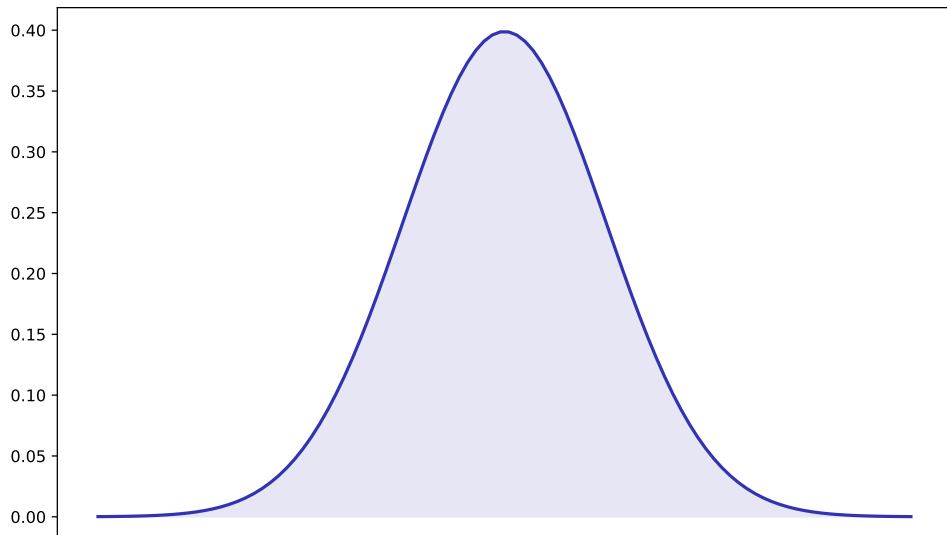




07 Distribution Fitting



08 Finance Distributions



Key Takeaways:

- Understand normal distribution properties
- Apply distributions to stock returns
- Use QQ-plots for normality testing
- Recognize fat tails in finance

Statistics + Visualization = Data Science foundation