

Lesson 14: Probability Distributions

Data Science with Python – BSc Course

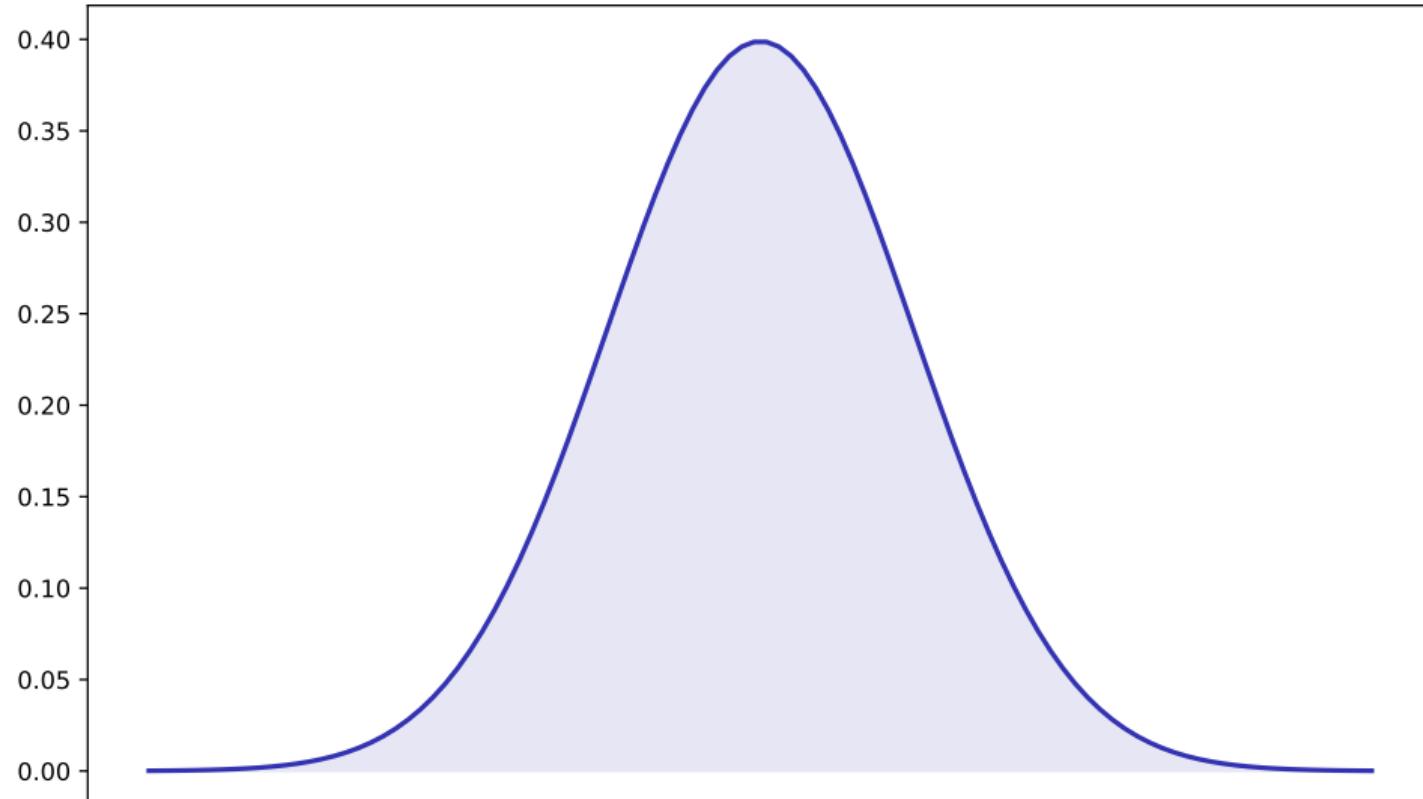
45 Minutes

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

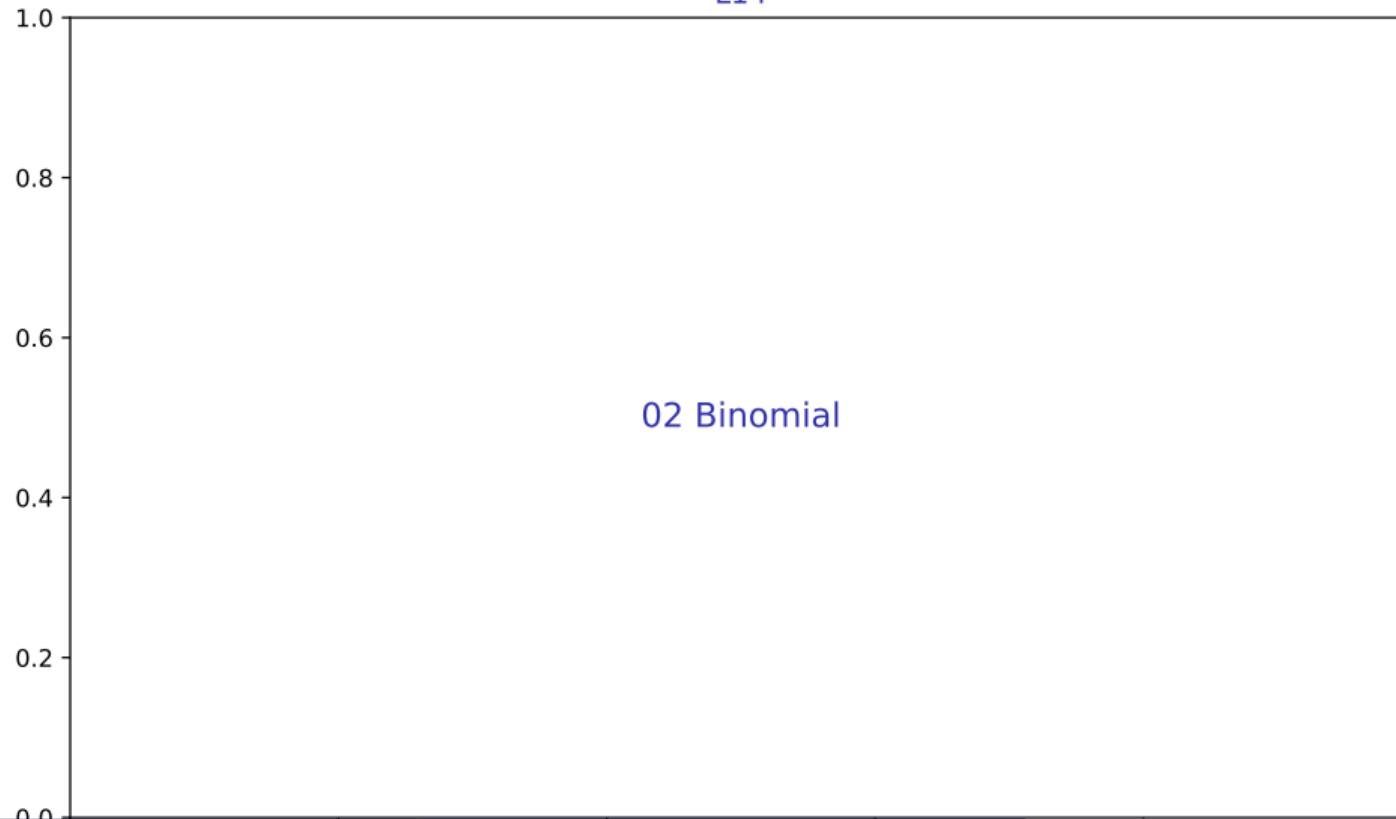
Finance application: Statistical analysis of market data

01 Normal Distribution



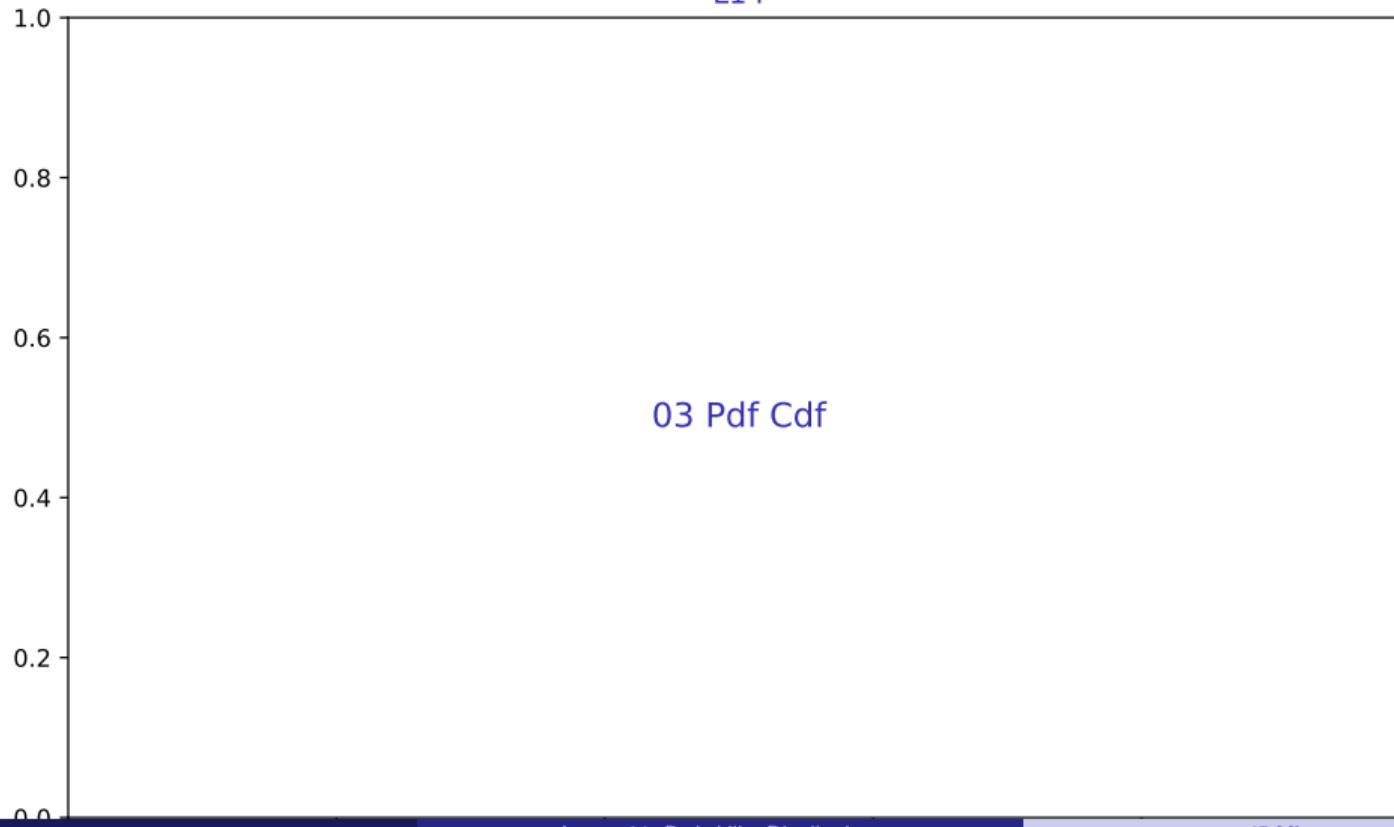
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02 Binomial



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03 Pdf Cdf



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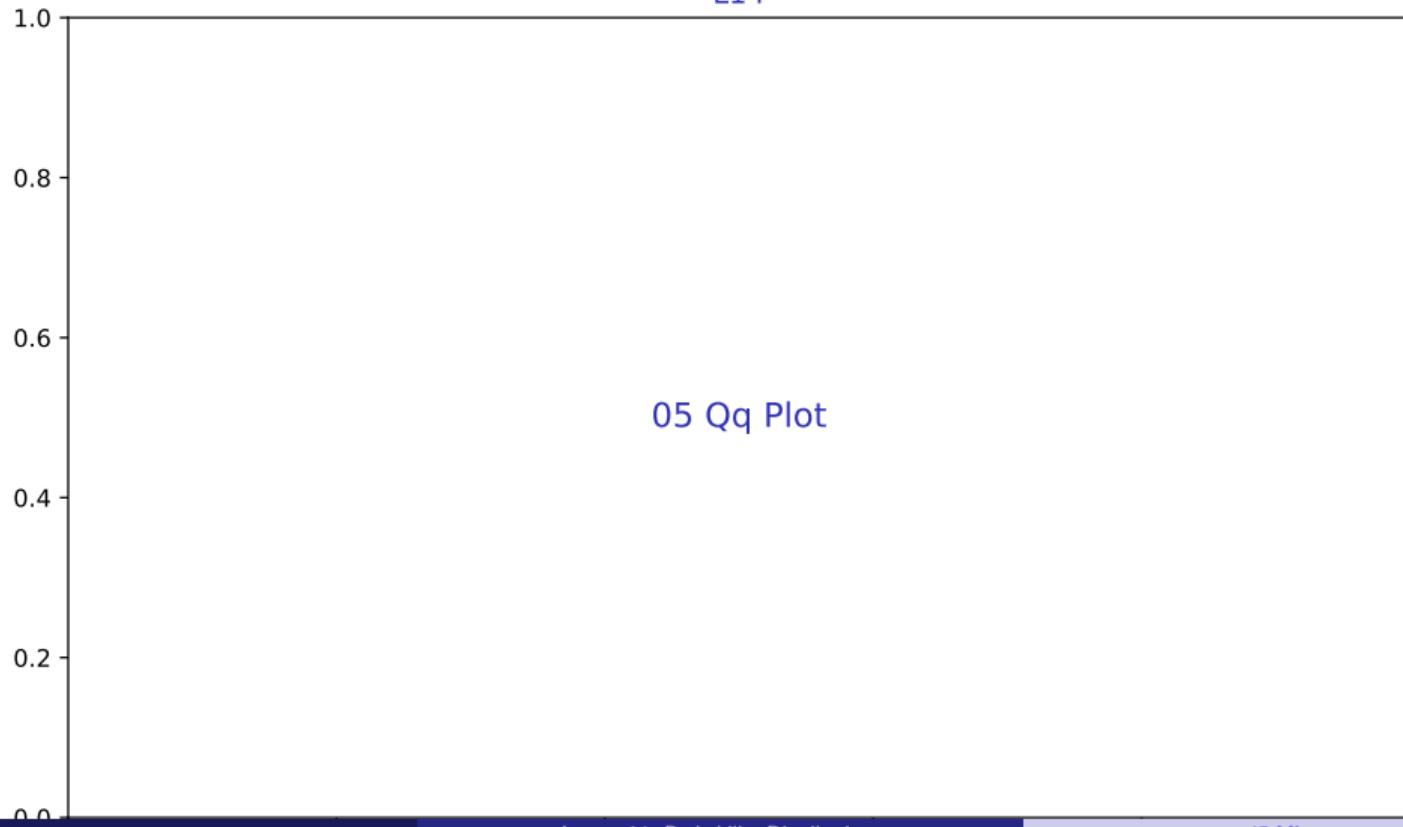
04 Stock Returns



Qq Plot

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05 Qq Plot

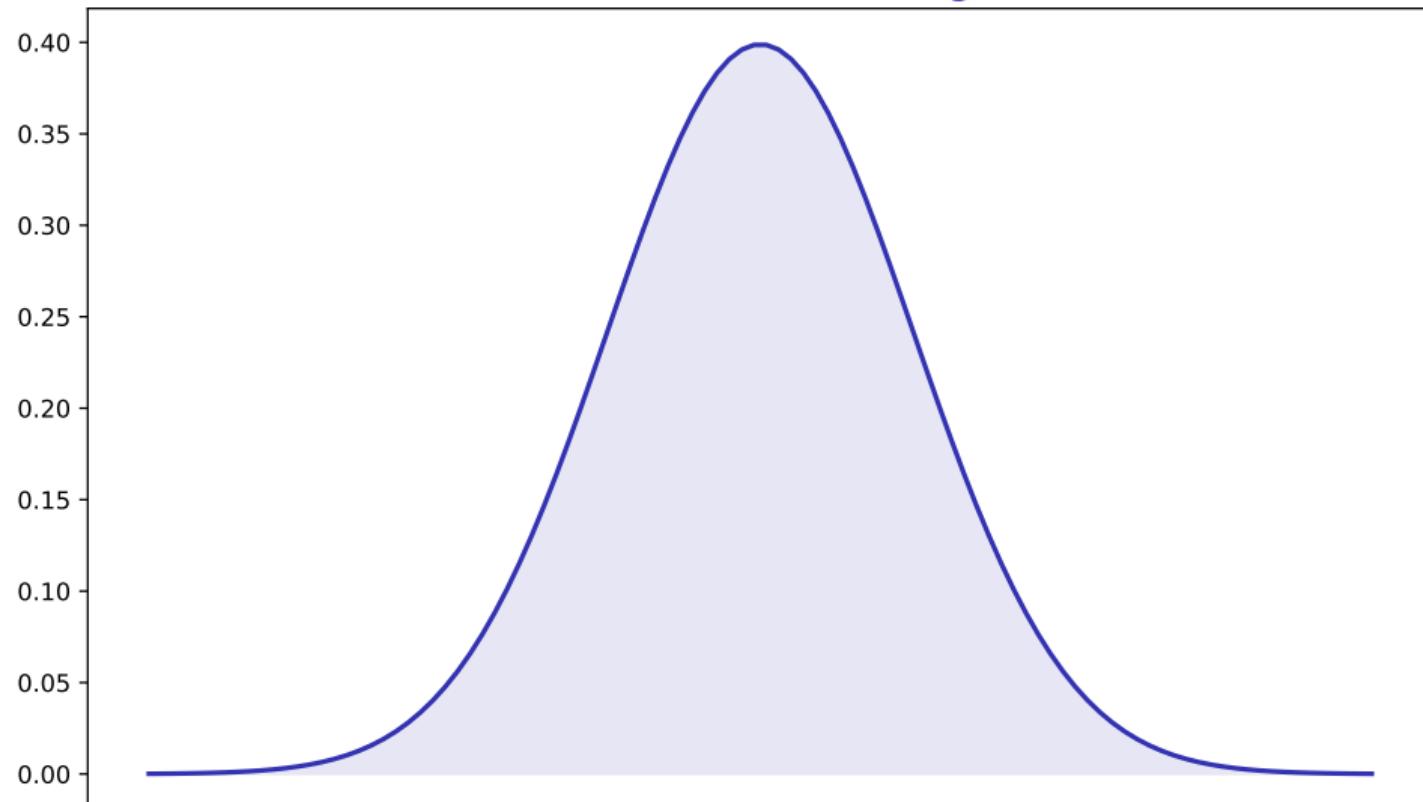


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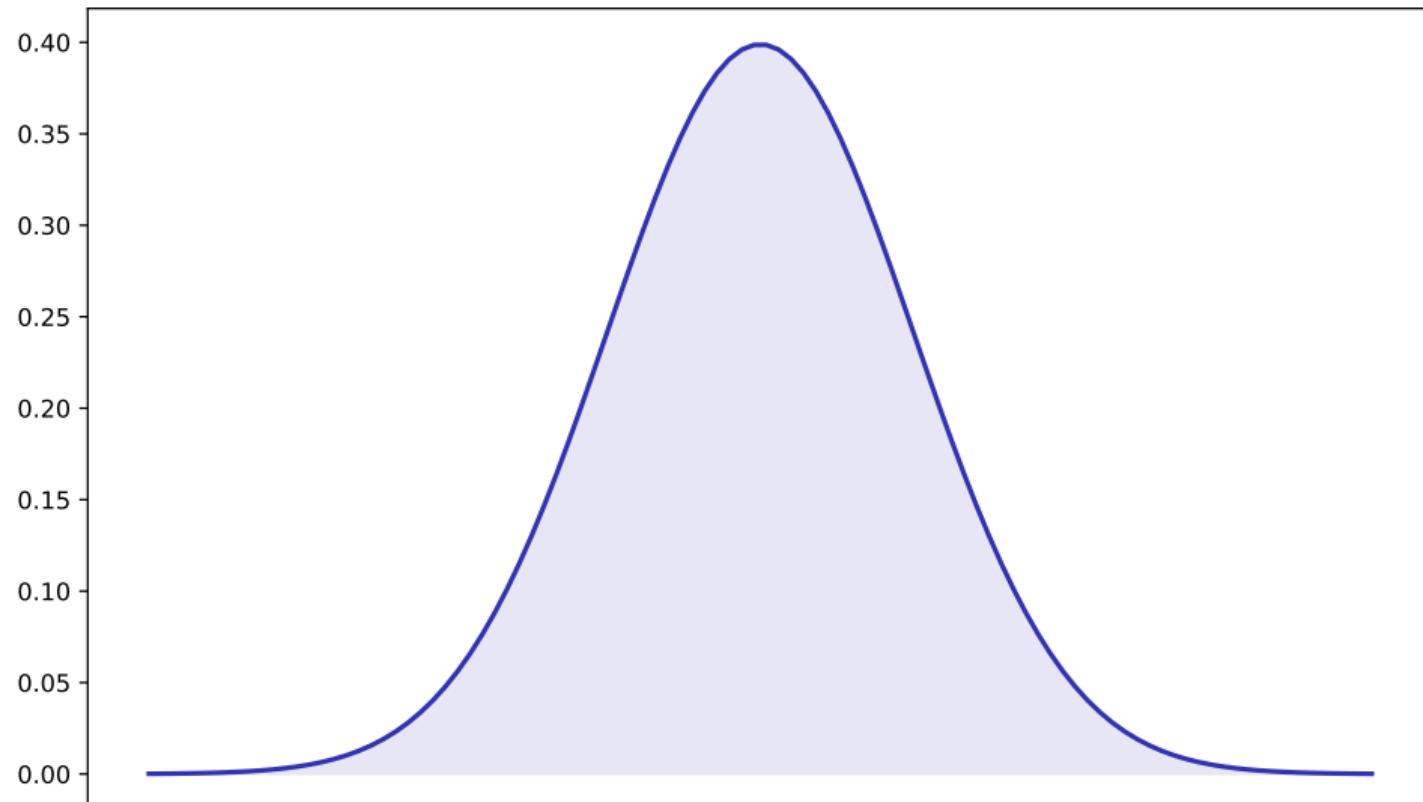
06 Fat Tails



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