Lesson 16: Correlation Analysis
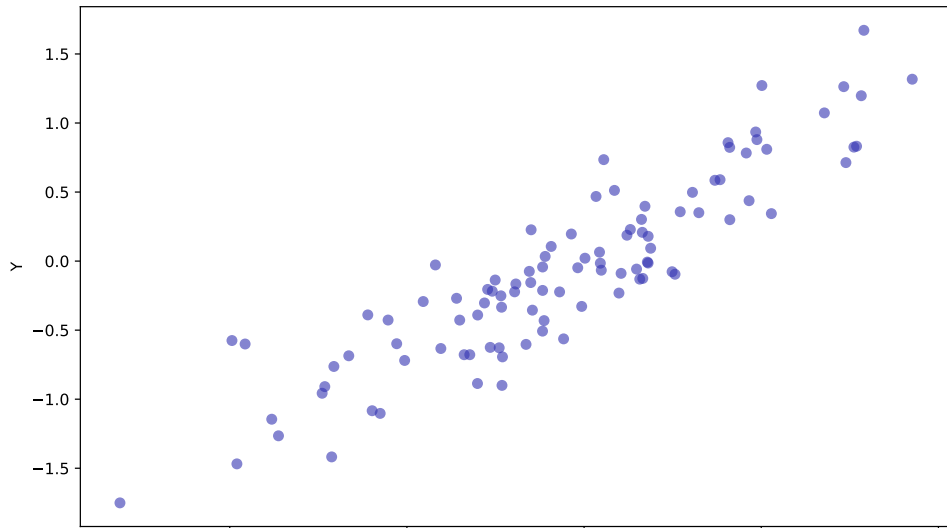### Data Science with Python – BSc Course

45 Minutes

Learning Objectives

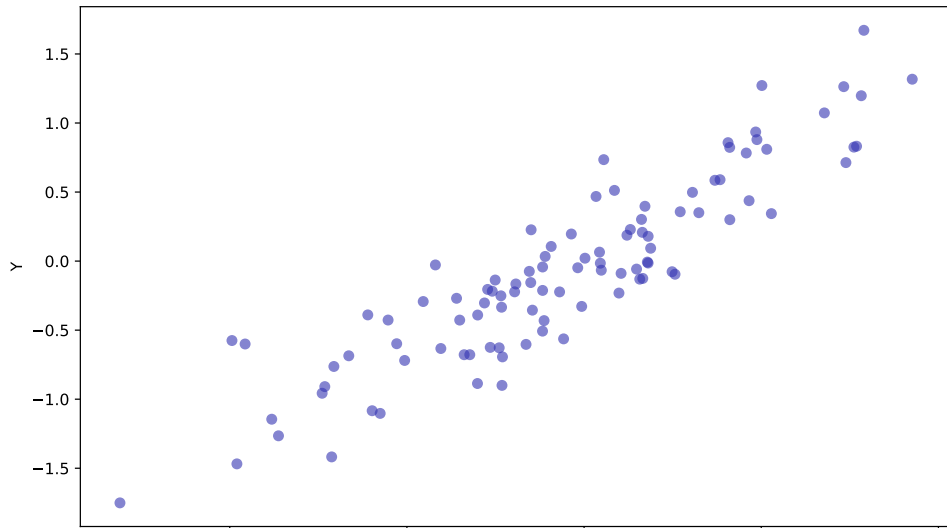**After this lesson, you will be able to:**

- Calculate Pearson and Spearman correlation
- Create correlation heatmaps
- Distinguish correlation from causation
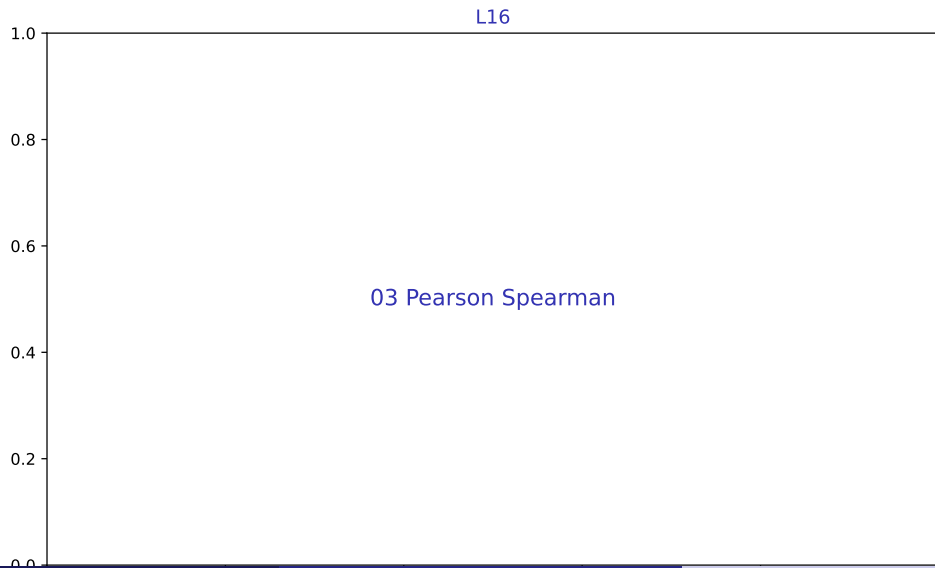- Apply to portfolio analysis

Finance application: Statistical analysis of market data
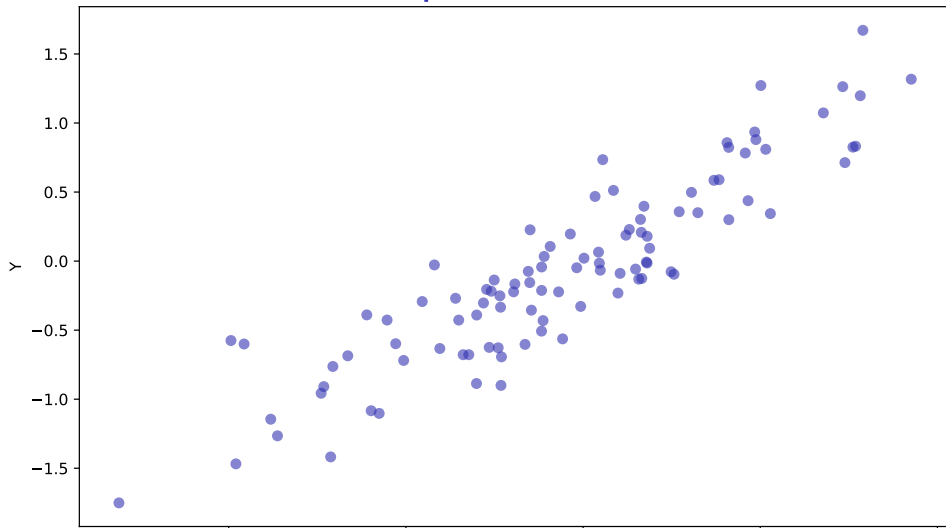
Correlation Scatter

01 Correlation Scatter

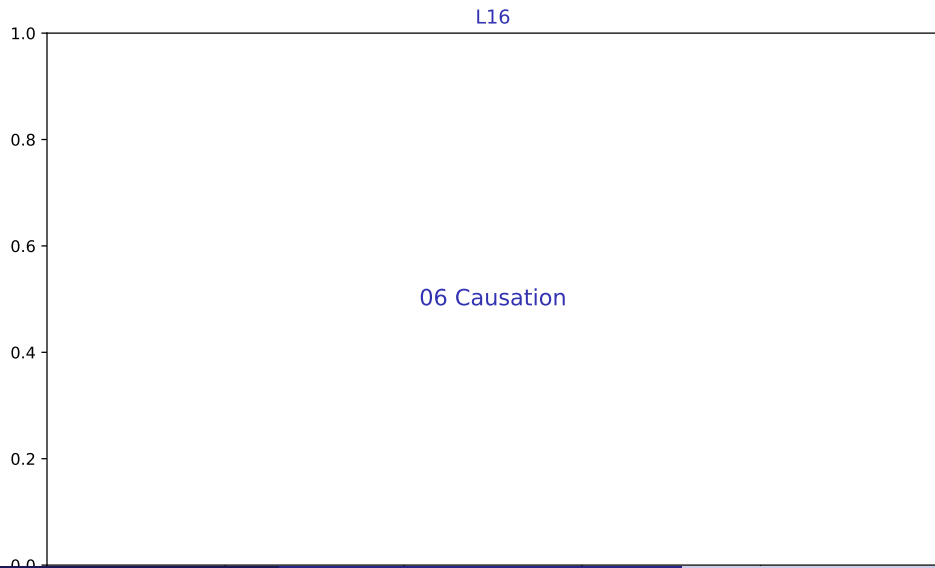## 02 Correlation Values

L16

03 Pearson Spearman

04 Heatmap

Spurious Correlation

05 Spurious Correlation
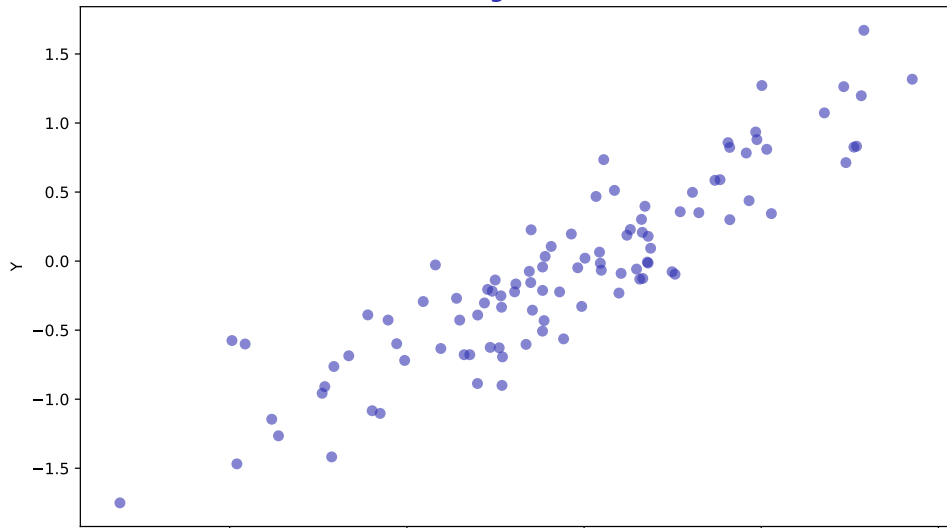
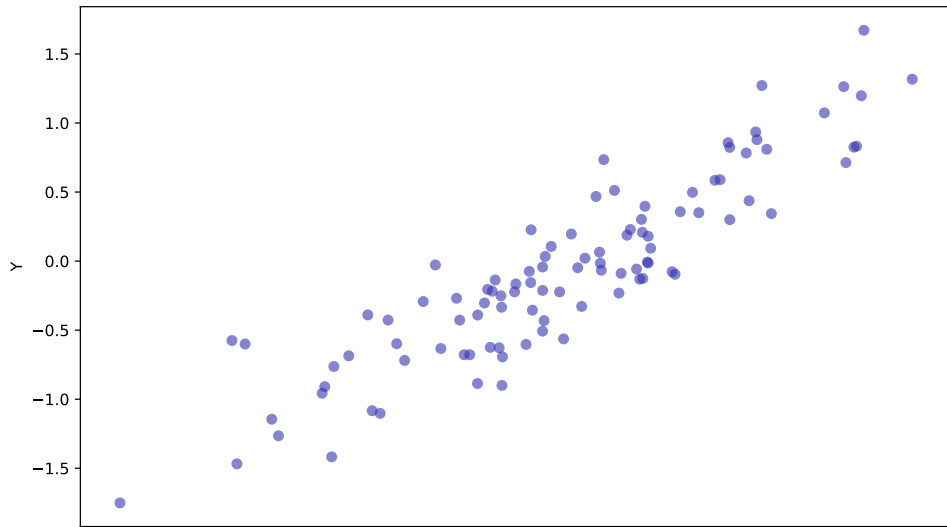# Causation

06 Causation

Rolling Correlation

07 Rolling Correlation

08 Portfolio Correlation

Lesson Summary

Key Takeaways:

- Calculate Pearson and Spearman correlation
- Create correlation heatmaps
- Distinguish correlation from causation
- Apply to portfolio analysis

Statistics + Visualization = Data Science foundation