

## **Part I: Introduction to Data Mining**

1. Introduction to Data Mining and Data Science
2. Data Mining Processes, Methods, and Software
3. Data Sampling and Partitioning
4. Data Visualization and Exploration
5. Data Modification

## **Part II: Data Mining Methods**

6. Model Evaluation
7. Regression Methods
8. Decision Trees
9. Neural Networks
10. Ensemble Modeling
11. Presenting Results and Writing Data Mining Reports
12. Principal Component Analysis
13. Cluster Analysis

## **Part III: Advanced Data Mining Methods**

14. Random Forest
15. Gradient Boosting
16. Bayesian Networks