AMERICAN UNIVERSITY OF BAHRAIN

BUSN 520 Business Data Mining and Predictive Analytics

Course Description

This course provides comprehensive coverage of widely used supervised and unsupervised data mining methods such as logistic regression, k-nearest neighbor, naïve Bayes, clustering, neural networks, regularization, and more. It offers a strong theoretical foundation in predictive analytics and machine learning models for classification and prediction based on big data. Through real-world case studies, students will learn to ethically apply and implement suitable techniques using state-of-the-art business analytics software and effectively present their findings.

Course Learning Outcomes

1. Demonstrate critical understanding of data mining theories, tools, and techniques, including classification, associations, clustering, and recommendations.
2. Apply advanced data mining concepts to business contexts.
3. Critically analyze large datasets in different business areas using statistical and data mining techniques.
4. Solve complex problems using professional data mining skills and techniques.
5. Communicate ethical and strategic decisions in both oral and written formats.
6. Demonstrate effective teamwork in presenting data-related business matters.

Learning Resources

- Olson, D., & Shi, Y. (2019). Introduction to Business Data Mining. McGraw-Hill.

Course Content

1. Introduction to Data Mining in Business
2. Data Mining Process and Knowledge Discovery
3. Database Support for Data Mining
4. Overview of Data Mining Techniques
5. Cluster Analysis
6. Regression Algorithms
7. Neural Networks in Data Mining
8. Decision Tree Algorithms
9. Ethical Aspects of Data Mining