EmpowerEdge Learning Solutions Inc.

LEVERAGING BIG DATA FOR STRATEGIC DECISION MAKING

Price: $2,300

Course Overview:

This course explores the use of big data analytics in informing strategic decision-making processes within organizations. It covers foundational concepts, tools, and techniques for handling and analyzing large datasets to derive actionable insights. Through case studies and practical applications, students will learn how to leverage big data to make informed strategic decisions that drive organizational success.

Course Objectives:

- Understand the fundamental concepts of big data and its relevance to strategic decision-making.
- Learn various techniques for collecting, storing, and processing big data.
- Explore data analysis methods and tools for extracting meaningful insights from large datasets.
- Apply big data analytics to real-world scenarios to support strategic decision-making processes.
- Develop critical thinking and problem-solving skills in leveraging big data for organizational strategy.

Week 1: Introduction to Big Data

- Understanding the characteristics and challenges of big data
- Overview of big data technologies and architectures
- Ethical considerations in big data analytics

Week 2: Data Collection and Integration

- Sources of big data: structured, unstructured, and semi-structured data
- Techniques for collecting and integrating diverse data sources
- Data preprocessing and cleaning for analysis

Week 3: Storage and Management of Big Data

- Distributed file systems and NoSQL databases
- Data warehousing and data lakes
- Scalable storage solutions for big data

Week 4: Introduction to Data Analytics

- Descriptive, predictive, and prescriptive analytics
- Exploratory data analysis techniques
- Introduction to data visualization tools and techniques

Week 5: Statistical Methods for Big Data Analysis

- Basic statistical concepts for analyzing large datasets
- Hypothesis testing and confidence intervals
- Regression analysis and predictive modelling

Week 6: Machine Learning for Big Data

- Overview of machine learning algorithms for big data analytics
- Supervised and unsupervised learning techniques
- Hands-on exercises with machine learning libraries (e.g., scikit-learn, TensorFlow)

Week 7: Text and Sentiment Analysis

- Introduction to natural language processing (NLP)
- Text preprocessing techniques for sentiment analysis
- Applications of text analysis in business decision-making

Week 8: Social Network Analysis

- Basics of social network theory
- Analyzing social networks for insights
- Case studies on leveraging social network analysis for strategic decision-making

Week 9: Real-Time Analytics and Stream Processing

- Challenges and opportunities of real-time data analytics
- Introduction to stream processing frameworks (e.g., Apache Kafka, Spark Streaming)
- Use cases of real-time analytics in business strategy

Week 10: Case Studies and Applications

- Analyzing real-world examples of big data-driven strategic decision-making
- Group projects: Applying big data analytics to a strategic business problem
- Presentation of group projects and discussion