

Data Analytics for Business

Assignment Guidelines

This assignment is designed to help students explore how data analytics can be used to support better business decisions, improve organisational performance, and create sustainable competitive advantage. Students are expected to critically examine how organisations collect, analyse, interpret, and communicate data to address real business problems.

The assignment should demonstrate an understanding of descriptive, diagnostic, predictive, and prescriptive analytics and show how these approaches can be applied across different business functions. Students should also consider the role of data quality, visualisation, business intelligence, artificial intelligence, and responsible data use in supporting managerial decision-making.

Submission Format

- Type: Detailed Project Report
- Font: Times New Roman, Size 12
- Line Spacing: Double-spaced
- Word Count: 3,000–4,000 words
- Referencing Style: APA
- Submission Deadline: To be announced by the respective professors

Assessment Criteria

- Understanding and application of fundamental business analytics concepts and approaches – 20%
- Critical analysis and interpretation of business data and analytical findings – 25%
- Application of relevant academic literature, analytical tools, and industry examples – 20%
- Strategic insight, practical recommendations, and consideration of ethical data practices – 25%
- Structure, academic writing, presentation, and APA referencing – 10%

Mandatory Sections

- Title Page
- Table of Contents
- Abstract
- Introduction
- Literature Review
- Methodology
- Findings
- Discussion
- Conclusion and Recommendations
- References
- Appendices

Assignment Task – Choose ONE of the Following Written Assignments

Option 1: Data-Driven Decision-Making and Business Performance

Analyse how organisations use business data and analytics to improve managerial decision-making, operational performance, and competitive advantage.

Your report should:

- Describe the functions of descriptive, diagnostic, predictive, and prescriptive analytics in supporting business decision-making.
- Discuss how organisations convert raw business data into relevant information and actionable insights for management.
- Assess the role of data analytics in informing decisions in the following areas: marketing, finance, operations, human resources, and customer relationship management.
- Consider the role of data quality, accuracy, completeness and relevance in helping managers make data-driven decisions.
- Identify the challenges that managers may encounter when they depend too much on analytical models, dashboards, and automated recommendations.
- Provide relevant examples of organisations that have leveraged data analytics to enhance business performance.
- Suggest practical approaches that organisations can take to build a more data-driven decision-making culture.

Option 2: Predictive Analytics for Business Forecasting and Strategic Planning

Evaluate how predictive analytics can help organisations anticipate future business conditions, reduce uncertainty, and improve strategic planning.

Your report should:

- Explain the purpose and business value of predictive analytics and how it differs from traditional descriptive reporting.
- Discuss the use of historical and real-time data in identifying patterns, relationships, and future business trends.
- Examine applications such as sales forecasting, customer churn prediction, demand forecasting, credit risk analysis, fraud detection, and predictive maintenance.
- Critically evaluate the benefits and limitations of statistical models, machine learning techniques, and AI-supported forecasting.
- Analyse how inaccurate, incomplete, or biased data can affect predictive outcomes and managerial decisions.
- Use relevant organisational examples to demonstrate how predictive analytics has supported business planning and performance.
- Recommend how managers can combine analytical predictions with professional judgement when making strategic decisions.

Option 3: Business Intelligence, Data Visualisation and Responsible Data Management

Examine how business intelligence and data visualisation tools can help managers understand complex information and make effective strategic and operational decisions.

Your report should:

- Describe the functions of BI, dashboards, KPIs, and visualisation in the context of current-day organisations.
- Assess the extent to which visualisation of data can enhance the understanding, communication, and actionability of business information.
- Comment on the necessity for different measuring and visualisation modalities for various managerial audiences.
- Investigate the application of business analysis and report writing tools such as Microsoft Power BI, Tableau, Excel, Python or comparable analytical tools.
- Evaluate the potential consequences of deceptive visualisation, poor metrics selection, data gaming and data jamming.
- What are the key issues in relation to data privacy, data security, data ownership, data transparency, data bias, and the responsible use of business data?
- Advise on a practical model for building an accountable, effective business intelligence climate in an organisation.