

Note: Incorporate research-informed solutions by referencing relevant literature, methodologies, and best practices throughout both reports.

Important Considerations for Case Study Selection and Report Structure

Case Study Selection:

1. **Significance and Relevance:** Your chosen case study should be significant and relevant to the field of data analytics. Consider its impact on real-world problems, its relevance to the course topics, and its alignment with current market demands in data science and analytics.
2. **Market Demand:** Assess the demand for insights or solutions related to your chosen case study in the industry. Select a case study that addresses a current or emerging need in the market, highlighting the practical applications of data analytics.
3. **Impact:** Evaluate the potential impact of your chosen case study. Look for opportunities to address significant challenges, make improvements, or generate valuable insights through data analysis.
4. **Problem Size:** Consider the complexity and scale of the problem addressed by your case study. Larger, more complex problems may offer greater opportunities for in-depth analysis and innovation in data analytics techniques.

Report Structure:

When structuring your report, follow these guidelines to ensure clarity, coherence, and effectiveness:

1. **Title:** Choose a descriptive title that accurately reflects the focus and significance of your case study.
2. **Abstract:** Provide a concise summary of the purpose, methodology, key findings, and implications of your analysis.
3. **Introduction:** Introduce your chosen case study, providing background information on its significance, relevance, and objectives. Clearly articulate the problem or challenge addressed by the case study.
4. **Literature Review:** Review existing literature related to your case study topic, demonstrating your understanding of current developments in data analytics and relevant research findings.
5. **Data Analysis:** Apply appropriate data analytics tools and techniques to analyze the dataset associated with your case study. Present your analysis findings, insights, and interpretations clearly and systematically.
6. **Conclusion:** Summarize the key findings of your analysis, highlighting their implications and potential contributions to the field of data analytics. Discuss any limitations or challenges encountered during the analysis process and suggest avenues for further research or improvement.

By selecting a significant case study and structuring your report effectively, you will demonstrate your ability to apply data analytics concepts and techniques to real-world problems, contributing meaningfully to the field.

Some specific examples can be,

- Customer churn prediction in telecom
- Fraud detection in online banking
- Predictive maintenance for manufacturing equipment
- Traffic congestion analysis in urban areas
- Disease prediction and management in healthcare
- Sentiment analysis of customer feedback for retail
- Energy consumption forecasting in smart grids
- Sales forecasting for seasonal products
- Image recognition for quality control in manufacturing
- Personalized recommendation systems for e-commerce

Note down that these are just examples, you are supposed to select something significant from your domain/field of choice.

Coursework 1: Report on Case Study Selection and Literature Review

Guidelines:

1. **Title:** Choose a descriptive and concise title that reflects the focus of your case study.
2. **Abstract:** Summarize the purpose, methodology, and key findings of your case study in approximately 250 words.
3. **Introduction:** Provide background information on the selected case study, its relevance, and the objectives of your analysis (750 words).
4. **Literature Review:** Review existing literature related to your case study topic, covering relevant theories, methodologies, and findings (min 2000 words).

Mapping with Learning Outcomes:

- LO1: Demonstrate a comprehensive understanding of current developments in data analytics (Literature Review).
- LO2: Develop the ability to use data analytic techniques to summarize data in a meaningful way (Abstract, Introduction).
- LO4: Demonstrate higher-order skills for integrative reasoning, problem-solving, and critical thinking in data analysis (Literature Review).

Rubrics:

Criteria	Excellent	Satisfactory	Not Satisfactory	Not Attempted
Title (5%)	Clearly articulates the focus of the case study and is concise, relevant, and aligned with the chosen topic.	Title is clear and mostly aligned with the chosen topic.	Title lacks clarity or relevance to the chosen topic.	No attempt made.
Abstract (15%)	Provides a concise summary of the purpose, methodology, and key findings of the case study.	Abstract is clear and adequately summarizes the case study.	Abstract is incomplete or lacks clarity.	No attempt made.
Introduction (30%)	Clearly states the objectives and provides relevant background information on the case study topic.	Introduction provides relevant background information and aligns with the objectives.	Introduction lacks clarity or coherence.	No attempt made.
Literature Review (50%)	Demonstrates a comprehensive understanding of current developments in data analytics through an in-depth review of relevant literature.	Literature review is comprehensive and critically evaluates relevant literature.	Literature review is superficial or lacks critical analysis.	No attempt made.

Coursework Assignment 2: Practical Data Analytics Report

Guidelines:

1. **Title:** Choose a descriptive title that reflects the analysis conducted and the dataset used.
2. **Abstract:** Summarize the purpose, methodology, and key findings of your data analysis in approximately 250 words.
3. **Introduction:** Provide background information on the dataset, its source, and the objectives of your analysis (500 words).
4. **Data Analysis:** Apply appropriate data analytics tools and techniques to analyze the dataset. Include visualizations, insights, and interpretations (1500 words).
5. **Conclusion:** Summarize the key findings, implications, and potential areas for further research (250 words).

Mapping with Learning Outcomes:

- LO2: Develop the ability to use data analytic techniques to summarize data in a meaningful way (Abstract, Data Analysis, Conclusion).
- LO3: Identify the analytical tools and tests to apply to diverse types of data (Data Analysis).
- LO4: Demonstrate higher-order skills for integrative reasoning, problem-solving, and critical thinking in data analysis (Data Analysis, Conclusion).

Rubrics:

Criteria	Excellent	Satisfactory	Not Satisfactory	Not Attempted
Title (5%)	Clearly articulates the focus of the analysis and is descriptive, relevant, and aligned with the dataset used.	Title is clear and mostly aligned with the analysis conducted.	Title lacks clarity or relevance to the analysis conducted.	No attempt made.
Abstract (10%)	Provides a concise summary of the purpose, methodology, and key findings of the data analysis.	Abstract is clear and adequately summarizes the data analysis.	Abstract is incomplete or lacks clarity.	No attempt made.
Introduction (15%)	Clearly states the objectives and provides relevant background information on the	Introduction provides relevant background information and	Introduction lacks clarity or coherence.	No attempt made.

	dataset and analysis conducted.	aligns with the objectives.		
Data Analysis (60%)	Demonstrates proficient use of data analytics tools and techniques, thorough analysis, and clear presentation of insights.	Analysis is comprehensive and supported by appropriate visualizations and interpretations.	Analysis is incomplete or lacks depth.	No attempt made.
Conclusion (10%)	Summarizes key findings, implications, and suggestions for further research in a clear and concise manner.	Conclusion provides a clear summary of key findings and implications.	Conclusion is incomplete or lacks clarity.	No attempt made.