Checklist for BDM Project

📕 CAPSTONE CHRONICLES_BDM Project Book.pdf
📕 BDM Capstone Project Document for 2025.pdf
📕 Capstone Project Book Shorter Version.pdf
📕 What is a Capstone Project_2.pdf
📕 Frequently asked questions.pdf
📄 Project_Details.png

https://youtube.com/@dr.aadityachandel?si=xeTZSoLX_mjLVmvL

Project With Primary Data

📕 BDM Capstone Project Rubrics- Analysis with Primary Data.pdf

Stage 1: Finding Business

- ☐ Make a list of Potential businesses you can reach out to for BDM Project
  - ○ Big-Small, Organized-Unorganised all works, often small and unorganized sectors are more challenging to solve.
- ☐ Try to establish initial contact with them and mark them as per the response.
- ☐ Have Business 1st approach- Understand their working and gaps in their business and try to identify problems through the conversation.
  - ○ Do not directly ask for data- They find it like an attack on their business secrets.
  - ○ Always use a Polite and Professional tone.
- ☐ Think about the problem - Guess the Potential Dataset required to solve these problems and ask for the dataset - the approach should be "solving the problem" through the dataset analysis and not the dataset.
  - ○ Do not forget to showcase "it is IIT Madras BS program - academic project - The BDM Capstone Project"
- ☐ Repeat the above 2 steps until you get your data.
  - ○ (If u find u have invested too much time and utilized all your means possible and still failed to get the data → Recommendation is to switch to Project With Secondary Data)
- ☐ Once you get the dataset - do a basic EDA - try to observe and get more detail into the Problems - Do one more conversation with the business and get confirmation on identified problem statements.

Resources:-

- ● 📕 Customer Acquisition and Retention- A Case of Vijayrams Coffee.pdf
- ● 📕 Data_Collection_Details.pdf
- ● 📕 Insights from Professional B2B Selling into the BDM Capstone Project.pdf

Workshops:-

- ● https://www.youtube.com/live/mf_feZUwDeU?si=X4lRLhU7Q_dcy4yK

Stage 2: Proposal

- ☐ Formatting
    - ☐ Font: Times New Roman, 12pt Spacing: 1.5
    - ☐ Alignment: Justified
    - ☐ Page numbers: Include on all documents
    - ☐ Figure and Table Numbers: Use and reference in-text where applicable
    - ☐ Writing Style: Clear, concise, professional, and uniform voice. Ensure good grammar, punctuation, and logical flow between sections and paragraphs.
    - ☐ Length: 4-5 pages Report + Cover Page + Index/Content Page + Declaration Page (Total 7-8 pages)
- ☐ Proposal Content
- ☐ Content Page
    - ☐ Title: Professional, communicative, avoid mentioning company names or layman's terms. Examples: "Optimizing Customer Support Workflow of an E-Learning Program" or "Price Prediction and Demand Forecasting for an Industrial Scrap Trading Company"
    - ☐ Name , Email
- ☐ Content / Index Page - with Headings and page number.
- ☐ Declaration Statement
    - ☐ Mandatory: Submissions without a declaration statement will be desk rejected.
    - ☐ Template: Available in the shared drive link (refer to source documents).
- ☐ 1. Executive Summary and Title (200-250 Words)
    - ☐ Paragraph 1: Brief description of the organization
    - ☐ Paragraph 2: Concise problem description
    - ☐ Paragraph 3: Outline the possible approach and desired solution.
- ☐ 2. Organization Background (150-200 Words)
    - ☐ Company Information: Inception, founders, net worth, organizational structure, products/services, number of employees, locations, mission and vision statements (if available).
    - ☐ Relevance: Avoid dumping all information; focus on details relevant to the problem statement.
- ☐ 3. Problem Statement (Listed as objectives) (100-120 Words)
    - ☐ Format: Bullet points, not paragraphs.
    - ☐ Number of Objectives: At least two (one broad objective is acceptable).
    - ☐ Explanation: 1-2 line explanation for each objective.
- ☐ 4. Background of the Problem (200-250 Words)
    - ☐ Detailed Explanation: Elaborate on the problem statement, providing context and relevant information.

- ☐ Context: Provide a more detailed explanation of the problem statement.
- ☐ Significance: Explain why this problem is important for the organization.
- ☐ 5. Problem Solving Approach (400 Words)
  - ☐ Sub-heading 5.1: Methods: Explain the chosen methodologies with justifications.
  - ☐ Sub-heading 5.2: Data Collection: Detail the intended data collection process, justifying the relevance of variables to the problem statement. Example: If the problem is stockouts, mention the need for data on opening stock, closing stock, buying price, selling price, etc.
  - ☐ Sub-heading 5.3: Analysis Tools: Describe the tools used for data analysis with reasons for their selection.
  - ☐ Justification: Ensure all methods, data collection processes, and analysis tools are justified with a clear rationale.
- ☐ 6. Expected Timeline (Work Breakdown Structure and Gantt Chart)
  - ☐ Work Breakdown Structure (WBS): Breakdown of project tasks and subtasks.
    - ■ Flow Chart
  - ☐ Gantt Chart: Visual representation of the project timeline, showing task durations and dependencies.
  - ☐ Importance: Essential for proposal approval; missing this will lead to desk rejection.
- ☐ 7. Expected Outcome (150-200 Words)
  - ☐ Deliverables: State the expected deliverables of the project.
  - ☐ Insights: Describe the likely implications and insights expected from the project.
  - ☐ Data-Driven: Emphasize that insights will be derived from data analysis and not intuition.
- ☐ General Checklist
  - ☐ Focus on Business Problems: The project must address a real-world business problem.
  - ☐ Primary Data: The project relies on primary data collected directly from the chosen business. Avoid using secondary data from sources like Kaggle or GitHub.
  - ☐ Novel Insights: The project should provide valuable insights that add value to the business decision-maker.
  - ☐ Plagiarism: Avoid plagiarism. Write the report in your own words and properly cite all sources.
  - ☐ Thoroughness: Follow the rubrics carefully and pay attention to detail in all aspects of the proposal, including formatting, writing, and content.

Rejected?
- ☐ Understand TA Comments Constructively

- ☐ Do not feel disheartened or demotivated - Level Unlocked - More Learning Opportunity
- ☐ Improve your report following the TA comments and above checklist
- ☐ Submit again
- ☐ Repeat until it get accepted

Resources:-

- 📄 Executive_Summary_2_2.pdf
- 📄 Problem Identification.pdf
- 📄 Problem_solving approach_details_3_2.pdf
- 📄 problem-statement_Doc.pdf
- 📄 Introduction to data collection.pdf
- 📄 Proposal Format.pdf

Workshops:-

- ▶ Business Problems and Metadata- BDM Capstone project

Stage 3: Mid Term

- ☐ Formatting
  - ☐ Font: Times New Roman, 12pt ; Spacing: 1.5; Alignment: Justified
  - ☐ Writing Style: Clear, concise, professional, and uniform voice. Ensure good grammar, punctuation, and logical flow between sections and paragraphs.
  - ☐ Length: 9-10 pages Report + Cover Page + Index/Content Page (Total 10-12 pages)
  - ☐ Page numbers: Include on all documents
  - ☐ Figure and Table Numbers: Use and reference in-text where applicable
- ☐ Midterm Content
- ☐ Content Page
  - ☐ Title: Same as Proposal
  - ☐ Name , Email
- ☐ Content / Index Page - with Headings and page number.
- ☐ 1. Executive Summary and Title (200-250 Words)
  - ☐ Paragraph 1- Brief about Organization with problem they are facing
  - ☐ Paragraph 2 - Brief about Data collected Highlighted with key Metadata (columns), Surveys and Descriptive statistics
  - ☐ Paragraph 3 - Brief about Analysis/Methodology Used and Highlights of gain results until mid-term.
  - ☐ Conciseness: While comprehensive, maintain a brief and focused summary.
- ☐ Conciseness: Maintain a brief and focused summary of key points.
- ☐ 2. Proof of Data Originality (10 marks)
  - ☐ Tangible Evidence: Demonstrate the use of primary data through:
    - ■ Survey Link: If applicable.
    - ■ Dataset Link
  - ☐ Letter from Organization: On official letterhead with stamp and signature.
  - ☐ Images: Of the firm/servicescape (max 5).
  - ☐ Short Video (3-8 mins): Interacting with the Point of contact from the business. The video can be in any language.
  - ☐ Credibility: This section is crucial to establish the project's credibility and the use of primary data.
- ☐ 3. Metadata (20 marks) and Descriptive Statistics (20 marks) (Total 40 marks)
  - ☐ Metadata:
    - ■ Definition: Data about the data collected.
    - ■ Content: Describe the variables collected, their importance, and relevance to the problem statement.

- - ■ Justification: Link the metadata and chosen variables to the problem statement.
  - ☐ Descriptive Statistics:
    - ■ Content: Provide descriptive statistics (mean, median, mode, standard deviation, etc.) for the collected data.
    - ■ Highlight Summary statistics that quantitatively describe or summarize features of a collection of information.
    - ■ Justification: Explain how these statistics relate to the problem statement.
- ☐ 4. Detailed Explanation of Analysis Process/Method (25 marks)
  - ☐ Data Cleaning and Preprocessing
    - ■ Explanation: Briefly describe the data cleaning process.
    - ■ Importance: Explain how data cleaning ensures data quality and accurate analysis.
- ☐ Analysis Process/Method
  - ☐ Point wise - Numbers/Bullets
  - ☐ Clarity: Provide a clear and detailed explanation of the analysis process.
  - ☐ Use Abstraction: Mathematical equations or definition
  - ☐ Justification: Justify each chosen method and explain its appropriateness compared to other methods.
  - ☐ Rationale: Connect the chosen analysis process/method directly to the problem statement.
  - ☐ Logical Flow: Present the analysis steps in a clear and logical order.
- ☐ 5. Results and Findings (10 marks)
  - ☐ Presentation: Utilize graphs, charts, and other visual representations alongside textual explanations.
  - ☐ Trends and Patterns: Clearly explain observed trends, patterns, and the reasons behind them.
  - ☐ Preliminary Insights: Present initial insights derived from the analysis.
- ☐ General Checklist
  - ☐ Primary Data Analysis: The midterm submission focuses on demonstrating your understanding of primary data collection, cleaning, and preliminary analysis.
  - ☐ Originality: Providing proof of primary data is critical.
  - ☐ Justification: Every step, from variable selection to analysis methods, must be justified with a clear rationale linked to the problem statement.
  - ☐ Clarity and Detail: Clearly and thoroughly explain the analysis process and findings, demonstrating your analytical skills and understanding.
- ☐ Additional Considerations
  - ☐ Building on the Proposal: The midterm submission expands upon the proposal, showcasing your progress in data collection and analysis.

☐ Refining Content: As you move through the project, refine your executive summary, results, and findings.

☐ Avoid Repetition: The final submission will be a comprehensive report; avoid making the midterm and final submissions too similar.

☐ Thoroughness: Pay attention to detail in formatting, writing, and content to demonstrate professionalism and attention to the rubrics.

Rejected?

☐ Understand TA Comments Constructively

☐ Do not feel disheartened or demotivated - Level Unlocked - More Learning Opportunity

☐ Improve your report following the TA comments and above checklist

☐ Submit again

☐ Repeat until it get accepted

Resources:-

- 📕 Data analysis project on Engine.pdf
- 📕 Data_Cleaning_Doc.pdf
- 📕 Design, Implement and Analyzing Survey.pdf
- 📕 Proof of Originality.pdf

Workshops:-

- ▶️ Business Problems and Metadata- BDM Capstone project
- ▶️ Insights from Professional B2B Selling into the BDM Capstone Project

Stage 4: Final Report

- ☐ Formatting
    - ☐ Font: Times New Roman, 12pt ; Spacing: 1.5; Alignment: Justified
    - ☐ Writing Style: Clear, concise, professional, and uniform voice. Ensure good grammar, punctuation, and logical flow between sections and paragraphs.
    - ☐ Length: 18-20 pages Report + Cover Page + Index/Content Page (Total 20-22 pages)
    - ☐ Page numbers: Include on all documents
    - ☐ Figure and Table Numbers: Use and reference in-text where applicable
- ☐ Final Submission Content
- ☐ Content Page
    - ☐ Title: Same as Proposal
    - ☐ Name , Email
- ☐ Content / Index Page - with Headings and page number.
- ☐ 1. Executive Summary and Title (200-250 Words)
    - ☐ Paragraph 1- Brief about Organization with problem they are facing
    - ☐ Paragraph 2 - Brief about Data collected Highlighted Descriptive statistics and Analysis/Methodology Used.
    - ☐ Paragraph 3 - Highlights of gain results and findings
    - ☐ Paragraph 4 - Highlights of Interpretation of result and recommendations (Also put if any improvement observed in the Business because of this project/recommendation/analysis.)
    - ☐ Conciseness: While comprehensive, maintain a brief and focused summary.
- ☐ 2. Detailed Explanation of Analysis Process/Method (15 marks)
    - ☐ Data Cleaning and Preprocessing
        - ■ Explanation: Briefly describe the data cleaning process.
        - ■ Importance: Explain how data cleaning ensures data quality and accurate analysis.
    - ☐ Comprehensive Explanation for each Method/Analysis Used: Provide a thorough and detailed explanation of the entire analysis process. This should go beyond the midterm submission and include all steps taken, from data collection to the final analysis.Use Abstraction - Mathematical equations or definitions
    - ☐ Justification: Justify all choices made, including the selection of methods, tools, and variables, always linking them back to the problem statement.
- ☐ 3. Results and Findings (Graphs and other Pictorial Representation Preferred and with words) (40 marks)
    - ☐ Visualizations: Utilize a variety of graphs, charts, tables, and other visual representations to effectively present findings.

- ☐ Textual Explanations: Accompany each visualization with clear and concise textual explanations.
- ☐ Depth and Insight: Go beyond simply describing the results. Analyze the findings, identify trends and patterns, and draw meaningful insights.
- ☐ 4. Interpretation of Results and Recommendations (20 marks)
  - ☐ Interpretation: Interpret the results in the context of the problem statement. Explain the significance of the findings and their implications for the business.
  - ☐ Actionable Recommendations: Provide specific, measurable, achievable, relevant, and time-bound (SMART) recommendations based on the findings.
    - ■ Writing style - Recommendations for each problem statement or Combined Recommendation based on Urgent and Long term
  - ☐ Implementation: Discuss the potential impact and benefits of implementing the recommendations.(Short paragraph)
- ☐ 5. Presentation and Legibility of the Report (10 marks)
  - ☐ Professionalism: Ensure the report is professionally presented with consistent formatting, clear headings, and a logical flow.
  - ☐ Legibility: Ensure the report is easy to read and understand. Use appropriate font size, spacing, and visual aids to enhance readability.
- ☐ Links:
  - ☐ Dataset Link
  - ☐ Analysis Link (Collab/Excel/G-Drive Folder/etc) (If any)
- ☐ General Checklist
  - ☐ Comprehensive Report: The final submission should be a complete and comprehensive report covering all aspects of the project.
  - ☐ In-Depth Analysis: Demonstrate in-depth analysis and interpretation of the findings.
  - ☐ Actionable Recommendations: Provide clear and actionable recommendations that can be implemented by the business.
- ☐ Additional Considerations
  - ☐ Cumulative Score: To be eligible for the viva voce, a cumulative score of 40/80 is needed from the proposal and midterm submission.
  - ☐ Building on Previous Submissions: The final submission should be a culmination of your work from the proposal and midterm stages.
  - ☐ Refinement: Refine and polish your executive summary, analysis process, results, findings, and recommendations based on feedback and insights gained throughout the project.
  - ☐ Plagiarism: Ensure the report is original and avoid plagiarism.
  - ☐ Thoroughness: Adhere to the rubrics carefully and pay attention to detail in all aspects of the final submission.

Rejected?

- ☐ Understand TA Comments Constructively
- ☐ Do not feel disheartened or demotivated - Level Unlocked - More Learning Opportunity
- ☐ Improve your report following the TA comments and above checklist
- ☐ Submit again
- ☐ Repeat until it get accepted

Resources:-

- 📄 services-marketing-9th-ed-sht(1).pdf
- 📄 The Cartoon Guide to Statistics.pdf
- 📄 Tips-to-Choose-Right-Data-Visualization-1690619316.pdf

Workshops:-

- ▶️ Insights from Professional B2B Selling into the BDM Capstone Project

Stage 5: Viva Voice

PPT Presentation

- ☐ A. Formatting
    - ☐ Slide Count: Maximum 10 slides, all-inclusive
    - ☐ Low-Text - High Visual Content
    - ☐ No Paragraphs - Key Pointers only
- ☐ Content
    - ☐ Title Slide: Project title, your name, roll number, IITM Online BS Degree Program affiliation.
    - ☐ Organization Background (1 slide): Briefly describe the organization, the nature of its business, and the specific problem you addressed.
    - ☐ Problem Statement (1 slide): Clearly articulate the problem, preferably as objectives with bullet points, not paragraphs.
    - ☐ Data Collection and Methodology (1-2 slides): Explain the data collection process (mentioning primary data explicitly) and justify your chosen methods and tools.
    - ☐ Results and Findings (3-4 slides): Visually present key findings using graphs and charts (refer to source for guidance on appropriate chart selection), and provide clear explanations of trends and patterns.
        - ■ Ensure that the graphs/charts used add value and are justified.
    - ☐ Interpretation and Recommendations (1-2 slides): Interpret the significance of the findings and provide specific, actionable, and data-driven recommendations for the business.
    - ☐ Conclusion and Next Steps(If any) : Briefly summarize the project's impact and outline potential future steps.
- ☐ Important Considerations
    - ☐ Focus on Key Findings: Given the 10-slide limit, prioritize the most impactful findings and insights.
    - ☐ Visual Appeal: Use clear and engaging visuals; avoid cluttered slides.
    - ☐ Conciseness: Present information succinctly and avoid overly detailed explanations.
    - ☐ Professionalism: Ensure a professional and consistent presentation style.

Viva Voce Preparation

- ☐ Key Areas to Prepare
    - ☐ Thorough Understanding: Demonstrate a deep understanding of your project, including the business problem, data analysis techniques, findings, and recommendations.
    - ☐ Primary Data Focus: Be prepared to discuss the importance of used primary data and to defend your data collection process.

- ☐ Justification of Choices: Be ready to explain and justify every decision made, including the selection of data, methods, and analytical tools.
- ☐ Be Prepared with Analysis Methods used , Results, Findings and Interpretation
- ☐ Context for Interpretation and Recommendations from Results and References(IF any)
- ☐ Linking to BDM Theory: Be prepared to connect your project and analysis to relevant concepts from the BDM theory course.
- ☐ Professional Selling Concepts: Consider how professional selling concepts were incorporated into your project, especially during data collection.
- ☐ Handling Challenging Questions: Anticipate challenging questions and prepare thoughtful responses. Practice responding to common questions about data limitations, alternative approaches, and the implementation of recommendations.
- ☐ B. Tips for Success
  - ☐ Practice: Rehearse your presentation and responses to potential questions.
  - ☐ Confidence and Clarity: Speak clearly, confidently, and concisely.
  - ☐ Engagement: Maintain eye contact, use a natural tone of voice, and be enthusiastic about your project.
  - ☐ Professionalism: Dress professionally and be punctual.
  - ☐ Honesty: Be honest about your limitations and areas for improvement.
  - ☐ Openness to Feedback: Listen attentively to the examiner's feedback and respond thoughtfully and ask questions if any.

Resources:-
- ●

Workshops:-
- ●

Project With Secondary Data

📕 BDM Capstone Project- Analysis with Secondary Data.pdf

Stage 0: Finding the Dataset

☐ Data Source Selection

    ☐ Reputable Repositories: Look for datasets on established platforms like Kaggle, GitHub, government data portals, or university research repositories. These sources often provide well-documented and curated data.

☐ Relevance to BDM: Select a dataset that aligns with the BDM course themes and allows you to apply concepts learned in the course.

    ☐ Business Problem Applicability: The dataset should be suitable for formulating a clear business problem that you can address through analysis.

☐ Data Quality: Evaluate the dataset's completeness, accuracy, consistency, and documentation.

☐ Data Dictionary: Ensure the dataset includes a data dictionary explaining each variable and its values.

Stage 1: Proposal

- ☐ Formatting
    - ☐ Font: Times New Roman, 12pt Spacing: 1.5
    - ☐ Alignment: Justified
    - ☐ Page numbers: Include on all documents
    - ☐ Figure and Table Numbers: Use and reference in-text where applicable
    - ☐ Writing Style: Clear, concise, professional, and uniform voice. Ensure good grammar, punctuation, and logical flow between sections and paragraphs.
    - ☐ Length: 4-5 pages Report + Cover Page + Index/Content Page + Declaration Page (Total 7-8 pages)
- ☐ Proposal Content
- ☐ Content Page
    - ☐ Title: Professional, communicative, avoid mentioning company names or layman's terms. Examples: "Optimizing Customer Support Workflow of an E-Learning Program" or "Price Prediction and Demand Forecasting for an Industrial Scrap Trading Company"
    - ☐ Name , Email
- ☐ Content / Index Page - with Headings and page number.
- ☐ Declaration Statement
    - ☐ Mandatory: Submissions without a declaration statement will be desk rejected.
    - ☐ Template: Available in the shared drive link (refer to source documents).
- ☐ 1. Executive Summary and Title (200-250 Words)
    - ☐ Paragraph 1: Brief description of the organization
    - ☐ Paragraph 2: Concise problem description
    - ☐ Paragraph 3: Clearly state that you are using a secondary dataset and mention the source. Outline the possible approach and desired solution.
- ☐ 2. Organization Background (150-200 Words)
    - ☐ Hypothetical or Real: You can either choose an existing organization or create a hypothetical one that aligns with your chosen dataset. If hypothetical, make sure its background is logical and well-defined.
    - ☐ Key Information: Include relevant details, such as:
        - ☐ Industry and market position
        - ☐ Products or services offered
        - ☐ Avoid dumping a lot of information; focus on details relevant to the problem statement.
- ☐ 3. Problem Statement (Listed as objectives) (100-120 Words)
    - ☐ Format: Bullet points, not paragraphs.
    - ☐ Number of Objectives: At least two (one broad objective is acceptable).

- ☐ Explanation: 1-2 line explanation for each objective.
- ☐ Clear and Concise: State the specific business problem you will investigate using the secondary dataset

☐ 4. Background of the Problem (200-250 Words)
- ☐ Detailed Explanation: Elaborate on the problem statement, providing context and relevant information.
- ☐ Context: Provide a more detailed explanation of the problem statement.
- ☐ Significance: Explain why this problem is important for the organization.
- ☐ Existing Knowledge: Briefly discuss any existing research or insights related to this problem.

☐ 5. Problem Solving Approach (400 Words)
- ☐ Sub-heading 5.1: Methods: Explain the chosen methodologies with justifications.
- ☐ Sub-heading 5.2: Provide the complete details of the repository from where the secondary data was collected.
  - ☐ Explain why you chose this specific secondary dataset.
  - ☐ Clearly connect the dataset to the problem statement and objectives.
- ☐ Sub-heading 5.3: Analysis Tools: Describe the tools used for data analysis with reasons for their selection.
- ☐ Justification: Ensure all methods, data collection processes, and analysis tools are justified with a clear rationale.

☐ 6. Expected Timeline (Work Breakdown Structure and Gantt Chart)
- ☐ Work Breakdown Structure (WBS): Breakdown of project tasks and subtasks.
  - ☐ Flow Chart
- ☐ Gantt Chart: Visual representation of the project timeline, showing task durations and dependencies.
- ☐ Importance: Essential for proposal approval; missing this will lead to desk rejection.

☐ 7. Expected Outcome (150-200 Words)
- ☐ Deliverables: State the expected deliverables of the project.
- ☐ Insights: Describe the likely implications and insights expected from the project.
- ☐ Data-Driven: Emphasize that insights will be derived from data analysis and not intuition.

☐ General Checklist
- ☐ Focus on Business Problems: The project must address a real-world business problem.
- ☐ Novel Insights: The project should provide valuable insights that add value to the business decision-maker.

- ☐ Plagiarism: Avoid plagiarism. Write the report in your own words and properly cite all sources.
- ☐ Literature Review(Optional): Conduct a literature review to understand the business problem, the dataset, and the relevant industry context.
- ☐ Thoroughness: Follow the rubrics carefully and pay attention to detail in all aspects of the proposal, including formatting, writing, and content.

Rejected?

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- ☐ Do not feel disheartened or demotivated - Level Unlocked - More Learning Opportunity
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Resources:-

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- ● 📕 Proposal Format.pdf

Workshops:-

- ●

Stage 2: Final Report

- ☐ Formatting
  - ☐ Font: Times New Roman, 12pt ; Spacing: 1.5; Alignment: Justified
  - ☐ Writing Style: Clear, concise, professional, and uniform voice. Ensure good grammar, punctuation, and logical flow between sections and paragraphs.
  - ☐ Length: 18-20 pages Report + Cover Page + Index/Content Page (Total 20-22 pages)
  - ☐ Page numbers: Include on all documents
  - ☐ Figure and Table Numbers: Use and reference in-text where applicable
- ☐ Final Submission Content
- ☐ Content Page
  - ☐ Title: Same as Proposal
  - ☐ Name , Email
- ☐ Content / Index Page - with Headings and page number.
- ☐ 1. Executive Summary and Title (200-250 Words)
  - ☐ Paragraph 1- Brief about Organization and problem statement
  - ☐ Paragraph 2 - Brief about Data collected Highlighted Key Metadata(columns) Descriptive statistics and Analysis/Methodology Used.
  - ☐ Paragraph 3 - Highlights of gain results and findings
  - ☐ Paragraph 4 - Highlights of Interpretation of result and recommendations
  - ☐ Conciseness: While comprehensive, maintain a brief and focused summary.
- ☐ 2. Proof of Originality
  - ☐ Secondary Data Focus: Provide the complete details of the website or repository from where the secondary data was collected.
  - ☐ Provide Dataset Link and Dataset Source Link
  - ☐ Elements NOT Required: You do not need to provide survey links, letters from organizations, or short videos, as these are specific to primary data projects.
- ☐ 3. Metadata and Descriptive Statistics
- ☐ Metadata:
  - ☐ Provide a detailed explanation of each variable (data field) in your dataset.
  - ☐ Include data types, ranges, units of measurement, and any other relevant information.
- ☐ Descriptive Statistics:
  - ☐ Calculate and present relevant descriptive statistics for your variables (e.g., mean, median, standard deviation, range).
  - ☐ Important: Highlight key numbers and why these statistics are meaningful in the context of the business problem.
- ☐ 4. Detailed Explanation of Analysis Process/Method

- ☐ Data Cleaning and Preprocessing
  - ☐ Explanation: Briefly describe the data cleaning process.
  - ☐ Importance: Explain how data cleaning ensures data quality and accurate analysis.
- ☐ Analysis Process/Method
  - ☐ Point wise - Numbers/Bullets
  - ☐ Clarity: Provide a clear and detailed explanation of the analysis process.
  - ☐ Use Abstraction: Mathematical equations or definition
  - ☐ Justification: Justify each chosen method and explain its appropriateness compared to other methods.
  - ☐ Rationale: Connect the chosen analysis process/method directly to the problem statement.
  - ☐ Logical Flow: Present the analysis steps in a clear and logical order.
- ☐ 5. Results and Findings
  - ☐ Visualizations (Important): Use a variety of appropriate graphs and charts to present your findings effectively. Clearly label and title all visualizations.
  - ☐ Trends and Patterns: Identify and explain key trends, patterns, and relationships revealed through your analysis.
  - ☐ Go beyond simply presenting the data. Interpret the findings in the context of the business problem. What do these results mean for the organization?
  - ☐ Rationale for Graphs: Justify why you chose to use each specific type of graph. Simple bar charts and Pareto charts are discouraged. Refer to the "graphical plotting pdf document" mentioned in the source (not provided here) for guidance on appropriate graph selection.
- ☐ 6. Interpretation of Results and Recommendations
  - ☐ Insightful Interpretation: Provide a comprehensive and insightful interpretation of the results you presented in the previous section.
  - ☐ Data-Driven: Emphasize that your recommendations are directly derived from the data analysis, not based on intuition.
  - ☐ Actionable Recommendations: Formulate clear, specific, and actionable recommendations that the organization can implement to address the business problem.
  - ☐ Impact and Benefits: Explain the potential impact and benefits of implementing your recommendations. How will they help the organization achieve its goals?
- ☐ 7. Presentation and Legibility
  - ☐ Professional Presentation: Ensure that your report is well-organized, easy to read, and professionally presented.

- ☐ Visual Appeal: Use appropriate formatting, headings, subheadings, bullet points, and white space to enhance readability.
- ☐ Additional Tips
  - ☐ Literature Review Integration: Integrate relevant findings from your literature review to support your analysis and recommendations.
  - ☐ Showcase BDM Knowledge: Demonstrate a strong understanding of BDM concepts throughout your report.
  - ☐ Thorough Proofreading: Proofread your report meticulously to eliminate any grammatical errors, typos, or inconsistencies.
- ☐ Addressing Challenges of Secondary Data
- ☐ Be prepared to address these challenges during your viva voce:
  - ☐ Defending Data Choice: You will need to convincingly justify your choice of a secondary dataset.
  - ☐ Demonstrating Originality: Examiners will look for evidence of original analysis and unique insights.
  - ☐ Data Limitations: Be prepared to discuss the limitations of your secondary dataset.

Rejected?

- ☐ Understand TA Comments Constructively
- ☐ Do not feel disheartened or demotivated - Level Unlocked - More Learning Opportunity
- ☐ Improve your report following the TA comments and above checklist
- ☐ Submit again
- ☐ Repeat until it get accepted

Resources:-

- 📕 Data analysis project on Engine.pdf
- 📕 Data_Cleaning_Doc.pdf
- 📕 Design, Implement and Analyzing Survey.pdf
- 📕 services-marketing-9th-ed-sht(1).pdf
- 📕 The Cartoon Guide to Statistics.pdf
- 📕 Tips-to-Choose-Right-Data-Visualization-1690619316.pdf

Workshops:-

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Stage 3: Viva Voice
(Same as Primary Data)

Few Secondary Data Sources (For reference)

      Union Gov data Sources - India:

https://www.data.gov.in/

https://www.mospi.gov.in/national-sample-survey-officensso

https://new.census.gov.in/census.website/

https://rbi.org.in/Scripts/Statistics.aspx

https://www.niti.gov.in/node/224

https://www.indiastat.com/

      Business data Sources:

Kaggle

Google Data Search https://datasetsearch.research.google.com/

Hayward Dataset -

https://hbsp.harvard.edu/catalog/collections/cases-with-datasets-in-multiple-disciplines

World Bank open data https://databank.worldbank.org/source/doing-business

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Last updated - 13:15, March, 17, 2025