**Case Study 1: Retail Sales Analysis**

1. **Introduction**

**1.1 Purpose**

**1.2 Topics Covered**

**1.3 Software and Libraries Used**

1. **Dataset Overview**

**2.1.a Description**

**2.1.b Screenshots/Images**

**2.2 Data Source**

**2.3 Assumptions**

**3. Solution Steps**

**3.1 Task 1: Data Collection**

**Steps:**

**Code:**

**3.2 Task 2: Data Cleaning**

**Steps:**

**Code:**

**3.3 Task 3: Descriptive Statistics**

**Steps:**

**Code:**

**3.4 Task 4: Visualizing Sales Trends**

**Steps:**

**Code:**

**3.5. Other Tasks …**

**4. Results**

**4.1 Descriptive Statistics Analysis**

**4.2 Visualization Insights**

***4.3 Insights for other Tasks …***

***Description***

***Code***

***SS***

**5. Conclusion and Recommendations**

**5.1 Summary**

**5.2 Future Steps**

**6. Appendix**

**6.1 Resources and References**

**7. Case Study Presentation/Discussion and Demo Video**

* **Video Link :**
* **Presentation /Slides File :**

Creating a comprehensive guide and rubric for a recorded video demo of a case study ensures consistency in presentation quality and evaluation standards. Here’s a step-by-step guideline for students or presenters, along with a rating rubric.

**Video Demo Guidelines for Case Study Presentation**

**1. Introduction (1-2 minutes)**

* **Objective**: Briefly introduce yourself and provide an overview of the case study topic.
* **Include**:
  + Presenter’s name(s).
  + Case study topic and industry or context.
  + The problem or objective of the case study.
  + Audience relevance (e.g., what problem it addresses for a particular sector or organization).

**2. Background and Context (2-3 minutes)**

* **Objective**: Offer essential background to help viewers understand the case study.
* **Include**:
  + Brief description of the company, organization, or context.
  + Key stakeholders and their roles.
  + Any significant historical data, market trends, or previous attempts to solve the issue.

**3. Problem Definition and Goals (1-2 minutes)**

* **Objective**: Clearly define the problem and specific goals or metrics.
* **Include**:
  + Description of the core problem.
  + Explanation of goals or objectives in quantitative or qualitative terms.
  + Mention of any assumptions, limitations, or scope boundaries.

**4. Data Analysis and Methodology (3-5 minutes) / Demo**

* **Objective**: Describe data sources, preprocessing steps, analytical techniques, and tools.
* **Include**:
  + Sources and type of data used.
  + Data preprocessing steps, including handling of missing values, outlier detection, or data transformations.
  + Methodologies applied (e.g., predictive models, visualization, descriptive analysis).
  + Explanation of why certain methods or tools were chosen (e.g., Python, R, Tableau).

**5. Solution/Analysis (5-7 minutes)**

* **Objective**: Walk through the solution or key insights derived from analysis.
* **Include**:
  + Key findings or insights from data analysis (use visualizations if applicable).
  + Demonstration of the proposed solution and any alternatives considered.
  + Challenges encountered and how they were addressed.
  + Impact analysis or effectiveness of the solution in solving the problem.

**6. Recommendations and Implementation Plan (2-3 minutes)**

* **Objective**: Present actionable recommendations and an implementation plan.
* **Include**:
  + Clear, actionable recommendations based on findings.
  + Suggested steps for implementation.
  + Timeline, resources needed, and possible challenges in implementation.

**7. Conclusion and Reflection (1-2 minutes)**

* **Objective**: Summarize findings and reflect on the project experience.
* **Include**:
  + Key takeaways or the main impact of your findings.
  + Reflection on what went well and what could be improved.
  + Any additional areas for future analysis or limitations of the current study.

**8. Presentation Quality**

* **Video Quality**: Ensure good lighting, clear visuals, and avoid background noise.
* **Slide Design**: Use a consistent theme, avoid clutter, and use visuals or charts to explain points clearly.
* **Delivery**: Speak clearly, maintain a steady pace, and avoid reading directly from slides.

**Rubrics and Scoring Guides:**

**Scoring Guide**

* **40-45 points**: Outstanding
* **30-39 points**: Very Good
* **20-29 points**: Satisfactory
* **Below 20 points**: Needs Improvement

**Rubric for Video Demo Evaluation**

| **Criteria** | **Excellent (5 points)** | **Good (4 points)** | **Average (3 points)** | **Needs Improvement (1-2 points)** |
| --- | --- | --- | --- | --- |
| **Introduction** | Clear, concise intro with strong context setting. | Clear but lacks depth. | Basic introduction with limited context. | Incomplete or missing intro. |
| **Background & Context** | In-depth, relevant, well-articulated background. | Sufficient background provided. | Basic background with minimal context. | Limited background and unclear context. |
| **Problem Definition** | Problem defined in specific, measurable terms with clear goals. | Problem defined but lacks measurable goals. | Vague problem definition and goals. | Problem unclear or goals missing. |
| **Data Analysis & Methods** | Comprehensive, relevant, and clear description of methods. | Relevant methods, minor details missing. | Basic methods, some unclear explanations. | Methods unclear or lacks coherence. |
| **Solution/Analysis** | Clear, thorough analysis with impactful insights and visuals. | Good analysis with minor issues in clarity or depth. | Basic analysis, insights lack depth. | Minimal analysis with unclear insights. |
| **Recommendations** | Actionable, practical, with implementation plan. | Recommendations provided, minor details missing. | Basic recommendations without a clear plan. | Limited or vague recommendations. |
| **Conclusion & Reflection** | Clear summary, insightful reflection, and future directions. | Good summary with minor lack of reflection or insight. | Basic summary with limited reflection or insights. | Weak summary, minimal reflection, or lacking insights. |
| **Presentation Quality** | Professional, engaging, and high-quality visuals and audio. | Good quality, minor issues in engagement or visuals. | Acceptable quality but lacks engagement. | Low-quality visuals, audio issues, or unengaging. |
| **Timing** | Adheres to time limits within 1-2 mins variance. | Slightly over or under time limit (3-4 mins). | Noticeable time variance (5+ mins over/under). | Major time discrepancy; overly lengthy or too brief. |