Industry Standard Documentation

**1. Project Charter:**

* **Project Title:** Customer Segmentation for a Retail Store
* **Project Manager:** Sai Charan Narsina
* **Start Date:** 15 July
* **End Date:** 24 July
* **Objectives:** To segment customers into distinct groups based on their purchasing behavior.
* **Scope:** Data cleaning, EDA, customer segmentation using K-Means, visualization using Matplotlib and Power BI.
* **Deliverables:** Insights, conclusions, and recommendations.

**2. Business Requirements Document (BRD):**

* **Business Problem:** Lack of understanding of different customer profiles leading to untargeted marketing strategies.
* **Business Objectives:** To improve customer satisfaction and sales by understanding customer segments.
* **Functional Requirements:** Data analysis, clustering, and visualization.
* **Non-functional Requirements:** Performance, scalability, and usability.

**3. Technical Requirements Document (TRD):**

* **Data Sources:** Mall Customers dataset
* **Technologies:** Python, Jupyter Notebook, Matplotlib, Seaborn, Scikit-learn, Power BI
* **Architecture:** Data preprocessing, EDA, clustering, and visualization
* **Data Flow:** Import data → Clean data → Analyze data → Segment customers → Visualize results

**4. Project Plan:**

* **Tasks:** Data collection, data cleaning, EDA, clustering, visualization, documentation
* **Timeline:** One weak
* **Risks:** Data quality issues, algorithm performance, visualization limitations