**Industry Standard Documentation**

**1. Project Charter:**

* **Project Title:** Customer Segmentation for a Retail Store
* **Project Manager:** THIPIRISETTI VENKATA SRI SAI KIRAN
* **Start Date:** 13-07-2024
* **End Date:** 17-07-2024
* **Objectives:** To segment customers into distinct groups based on their purchasing behaviour.
* **Scope:**
  + Data cleaning: It involves identifying and correcting errors and inconsistencies in the dataset to ensure that it is accurate, complete for analysis. It includes handling missing values and encoding categorical Variables.
  + EDA: Exploratory data analysis helps in understanding the patterns and relationships in data. It is used for visualizing distributions of variables and relationships between variables. mean, mode and median were used to summarize the data.
  + Customer segmentation using K-Means: Customer segmentation involves dividing customer groups based on their characteristics and purchasing behaviour. Using K-means cluster, we can identify clusters of customers with similar attributes such as age, annual income, spending score
  + Visualization using Matplotlib and Power BI: We can create a various visualizations using python library matplotlib and Microsoft tool power bi.
* **Deliverables:**
  + Insights: We can get clear view of customer characteristics, by recognizing their purchasing patterns.
  + Conclusions: We can observe different trends discovered during the analysis. They provide a clear and concise summary of results. These conclusions can also be helpful in business growth and customer satisfaction.
  + Recommendations: By taking insights and conclusions, we can recommend best business strategies to improve product services.