**Project Initialization and Planning Phase**

| Date | 19 March 2025 |
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| Team ID | LTVIP2025TMID19942 |
| Project Title | Cosmetic Insights Navigating Cosmetics Trends and Consumer Insights with Tableau |
| Maximum Marks | 3 Marks |

**Project Proposal (Proposed Solution) template**

This project proposal outlines a solution to analyze cosmetic trends and consumer preferences using Tableau. The proposed solution provides a data-driven approach to understanding market dynamics, enabling better decision-making for brands and consumers.

| **Project Overview** | |
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| Objective | To develop a Tableau-based dashboard that visualizes and analyzes cosmetic industry trends, consumer preferences, and purchasing patterns using real-world data. |
| Scope | * Data collection from industry reports, social media trends, and e-commerce platforms. * Visualization of key cosmetic trends such as product popularity, pricing strategies, and consumer sentiments. * Predictive analytics to forecast emerging beauty trends. |
| **Problem Statement** | |
| Description | The cosmetic industry is highly dynamic, with rapidly changing trends influenced by consumer preferences, social media, and innovation. However, businesses struggle to extract actionable insights from vast and unstructured data sources. |
| Impact | By implementing a data visualization solution, companies can make informed decisions regarding product launches, marketing strategies, and inventory management, ultimately improving customer satisfaction and profitability. |
| **Proposed Solution** | |
| Approach | * Collect data from industry reports, social media analytics, and e-commerce sales records. * Clean, preprocess, and integrate data for structured analysis. * Use Tableau to create interactive dashboards featuring key metrics and trend analyses. * Implement statistical models to predict future cosmetic trends. * Provide insights through filters and drill-downs for deeper analysis. |
| Key Features | * Real-time trend tracking for beauty products and brands. * Consumer sentiment analysis using NLP techniques. * Interactive dashboards for visual exploration of industry data. * Comparative analysis of product performance across categories. * Forecasting module for trend prediction. |

**Resource Requirements**

| **Resource Type** | **Description** | **Specification/Allocation** |
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| **Hardware** | | |
| Computing Resources | CPU/GPU specifications, number of cores | e.g., 2 x NVIDIA V100 GPUs |
| Memory | RAM specifications | e.g., 8 GB |
| Storage | Disk space for data, models, and logs | e.g., 1 TB SSD |
| **Software** | | |
| Frameworks | Python frameworks | e.g., Flask |
| Libraries | Additional libraries | e.g., scikit-learn, pandas, numpy |
| Development Environment | IDE, version control | e.g., Jupyter Notebook, Git |
| **Data** | | |
| Data | Source, size, format | e.g., Kaggle dataset, 10,000 images |