**Project Development Phase**

**Model Performance Test**

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| --- | --- |
| Date | 28-06-2025 |
| Team id | LTVIP2025TMID49157 |
| Project name | Cosmetic Insights : Navigation cosmetics trends and consumer insights using Tableau |
| Maximum marks | 4 marks |

**Model Performance Testing:**

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| --- | --- | --- |
| **S.No.** | **Parameter** | **Values** |
|  | Data Rendered | Raw dataset with product Label, Brand, Price, Rank, Ingredients, and skin suitability columns (Sensitive, Dry, Normal, Oily). ~500+ rows. |
|  | Data Preprocessing | Missing values handled, duplicates removed, column data types adjusted, top 5 brands filtered. |
| 3. | Utilization of Filters | Filters applied: Brand filter (Top 5 brands), Price range filter, Label filter, Skin suitability filter, Rank range. |
| 4. | Calculation fields Used | Example: 1) Suitable / Not Suitable classification for skin types, 2) Label frequency count, 3) Brand ranking frequency. |
| 5. | Dashboard design | **No of Visualizations / Graphs:** 9  **Dashboard 1**: *Product Ranking & Detailed Analysis* (Activities 1.1, 1.2, 1.3, 1.8, 1.9)  **Dashboard 2**: *Product Suitability Overview* (Activities 1.4, 1.5, 1.6, 1.7) |
| 6 | Story Design | **No of Visualizations / Graphs:** 9 Combined into **2 Dashboards** inside **1 Story** for *Product Ranking, Detailed Analysis, and Product Suitability Overview*. |

**Key Performance Metrics**

| **Metric** | **Description** |
| --- | --- |
| **Dashboard Load Time** | Time taken for the dashboard to load completely after initial access |
| **Visualization Rendering Time** | Time taken to load individual charts or visual components |
| **Filter Response Time** | Time taken to reflect results after applying a filter or parameter |
| **Calculated Fields Evaluation** | Time spent computing formulas, KPIs, or conditional visuals |
| **Data Volume** | Number of rows and columns processed within each worksheet |

**Test Results Summary**

| **Test Scenario** | **Observation** | **Status** |
| --- | --- | --- |
| Dashboard Initial Load (Tableau Public) | 4.2 seconds on average | ✅ Pass |
| Filter Response (e.g., Gender = Female) | 1.1 seconds | ✅ Pass |
| Story Scene Switch Time | 2.3 seconds between transitions | ✅ Pass |
| Visual Rendering with All Filters Applied | Slight lag on mobile, smooth on desktop | ⚠️ Acceptable |
| Load on Flask Web Page | Fully rendered within 5–6 seconds (including embedded script) | ✅ Pass |

**Recommendations for Optimization**

| **Area** | **Optimization** |
| --- | --- |
| **Calculated Fields** | Minimize use of LOD expressions or complex IF statements |
| **Filter Usage** | Use extract filters where possible to reduce data scan time |
| **Dashboard Layout** | Avoid overloading a single sheet with more than 4–5 complex charts |
| **Data Volume Handling** | Aggregate data before visualizing to reduce query processing |