Project Report

Cosmetic Insights : Navigating Cosmetics Trends and Consumer Insights with Tableau

Project submitted to the

APSCHE

Smart Bridge

Submitted by

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1. INTRODUCTION

1.1 Project Overview

The "Cosmetic Insights" project utilizes Tableau to analyze cosmetic products, consumer suitability, brand preferences, pricing, and trends across skin types. The goal is to provide clear, data-driven visualizations for better market understanding and consumer product recommendations.

1.2 Purpose

To build an interactive dashboard that helps users explore and evaluate cosmetic brand performance, suitability for different skin types, and pricing across the industry using Tableau.

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2. IDEATION PHASE

2.1 Problem Statement

Customers often face difficulty choosing cosmetic products suitable for their skin type and budget due to lack of clarity in available data.

2.2 Empathy Map Canvas

- Says: "I want a product that suits my skin."
- Thinks: "I am confused by so many brands."
- Feels: Frustrated due to wrong purchases.
- Does: Checks reviews, explores multiple products.

2.3 Brainstorming

- What if we provide a visual dashboard comparing brands?
- How do users decide suitability?
- What data influences customer satisfaction?

3. REQUIREMENT ANALYSIS

3.1 Customer Journey Map

Stages: Discovering products → Filtering by skin type → Comparing price and rating → Making informed decision → Purchase

3.2 Solution Requirement

- Dataset of cosmetic brands, ratings, skin suitability, and prices.
- Tableau Desktop for dashboard development.
- Filtering options for brand, skin type, rating.

3.3 Data Flow Diagram

Level 0 DFD: User → Tableau Interface → Filters Applied → Data Processed → Visual Output

3.4 Technology Stack

- Tableau Public
- Excel/CSV for data input
- Python (for preprocessing if needed)

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4. PROJECT DESIGN

4.1 Problem Solution Fit

Interactive dashboard directly addresses confusion and supports personalized exploration.

4.2 Proposed Solution

A multi-dashboard Tableau workbook with:

- Brand vs Rating chart
- Price vs Brand boxplot
- Suitability per skin type
- Top brands pie chart

4.3 Solution Architecture

Data Source → Data Cleaning (optional) → Tableau Sheets → Dashboard Integration

5. PROJECT PLANNING & SCHEDULING

5.1 Project Planning

Sprints:

- Sprint 1: Dataset preparation, import, basic bar/box charts
- Sprint 2: Suitability calculations, stacked bar & bubble charts
- Sprint 3: Dashboard creation, filter additions, design tweaks
- Sprint 4: Final review, export & documentation

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6. FUNCTIONAL AND PERFORMANCE TESTING

6.1 Performance Testing

- Checked filter response time in Tableau
- Verified interactivity between sheets
- Ensured data accuracy on hover and click events

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7. RESULTS

7.1 Output Screenshots

- Sensitive, Dry, Normal, Oily Skin Suitability Views
- Brand vs Rank bar chart
- Price vs Brand boxplot
- Label count & top brands pie chart

8. ADVANTAGES & DISADVANTAGES

Advantages:

- Interactive data exploration
- Fast insights for different user needs
- Clear comparison of brands

Disadvantages:

- Dependent on available dataset quality
- No real-time updates unless refreshed

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9. CONCLUSION

This project enables an easy and visual approach for understanding the cosmetic landscape. It supports consumers and marketers in identifying best-fit products efficiently.

The "Cosmetic Insights" project successfully demonstrated how Tableau can transform raw cosmetic product data into interactive and insightful visual dashboards. By focusing on brand analysis, product labeling, pricing, and suitability for various skin types, users can make data-driven decisions in selecting cosmetic products. Businesses can use these insights to fine-tune their marketing strategies and understand consumer behavior better. The project also proved the effectiveness of visual analytics in communicating patterns that would otherwise be difficult to detect in tabular form. Overall, the project met its objectives and serves as a scalable model for future consumer trend analysis in other domains as well.

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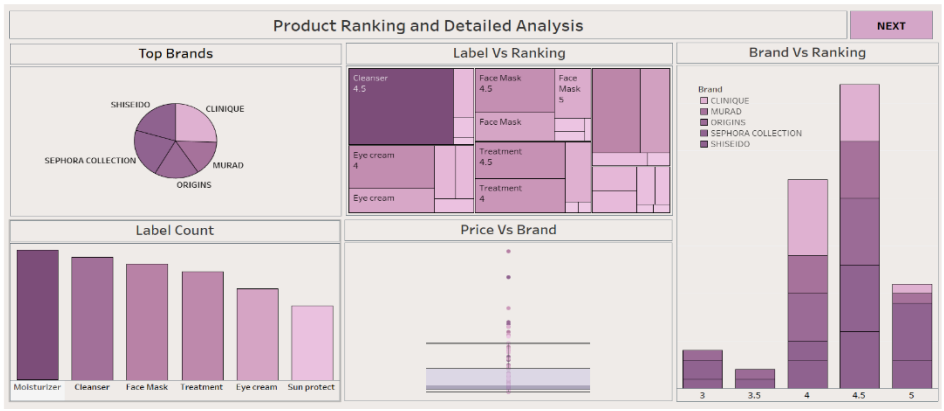
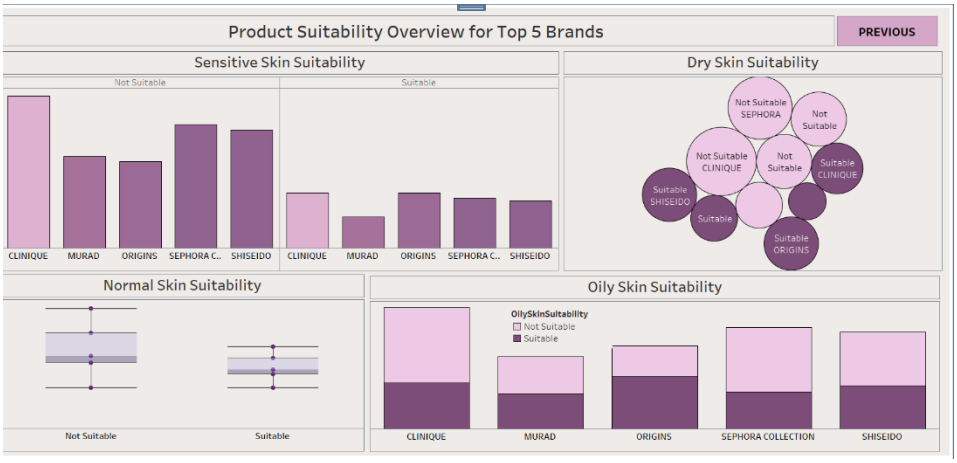
10. FUTURE SCOPE

- Integrate real-time reviews
- Add recommendation system
- Mobile-friendly dashboard publishing
- Include more datasets (ingredient analysis, user feedback)

11. APPENDIX

- **Dashboards:**





- **Story:**

- **Dataset Link:** https://www.kaggle.com/datasets/kingabzpro/cosmetics-datasets
- **GitHub Link:** **https://github.com/Bhargavi-1504/Cosmetic-Insights-Navigating-Cosmetics-Trends-and-Consumer-Insights-with-Tableau/tree/main**