

An internship in

Data analytics with tableau

By smartinternz

Project name:- Cosmetic Insights : Navigating Cosmetics Trends and Consumer Insights with Tableau

Project id:- LTVIP2026TMIDS57478

Date:- 20-02-2026

1. INTRODUCTION

1.1 Project Overview:-

- This project aims to address a specific problem/opportunity by designing and implementing an effective, innovative, and practical solution. The focus is on achieving measurable outcomes through structured planning, collaboration, and continuous improvement.
- The project begins with understanding the problem statement and identifying key requirements. Based on this analysis, suitable strategies, tools, and methodologies are selected to ensure efficiency and quality. The project emphasizes user needs, real-world applicability, and sustainable results.
- Key activities include research and data collection, design and development, implementation, testing, and evaluation. Throughout the project lifecycle, performance is monitored to ensure goals are met within the defined timeline and resources.
- By the end of the project, the expected outcome is a reliable solution that adds value to stakeholders, improves processes or experiences, and demonstrates innovation, learning, and impact.

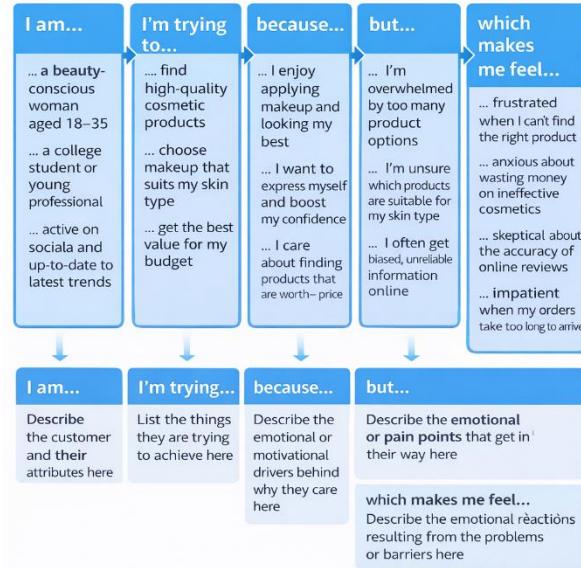
1.2 Purpose:-

- The purpose of this project is to identify a specific problem or opportunity and develop an effective solution that delivers measurable value. It aims to apply knowledge, skills, and innovative thinking to create practical outcomes that address real-world needs.

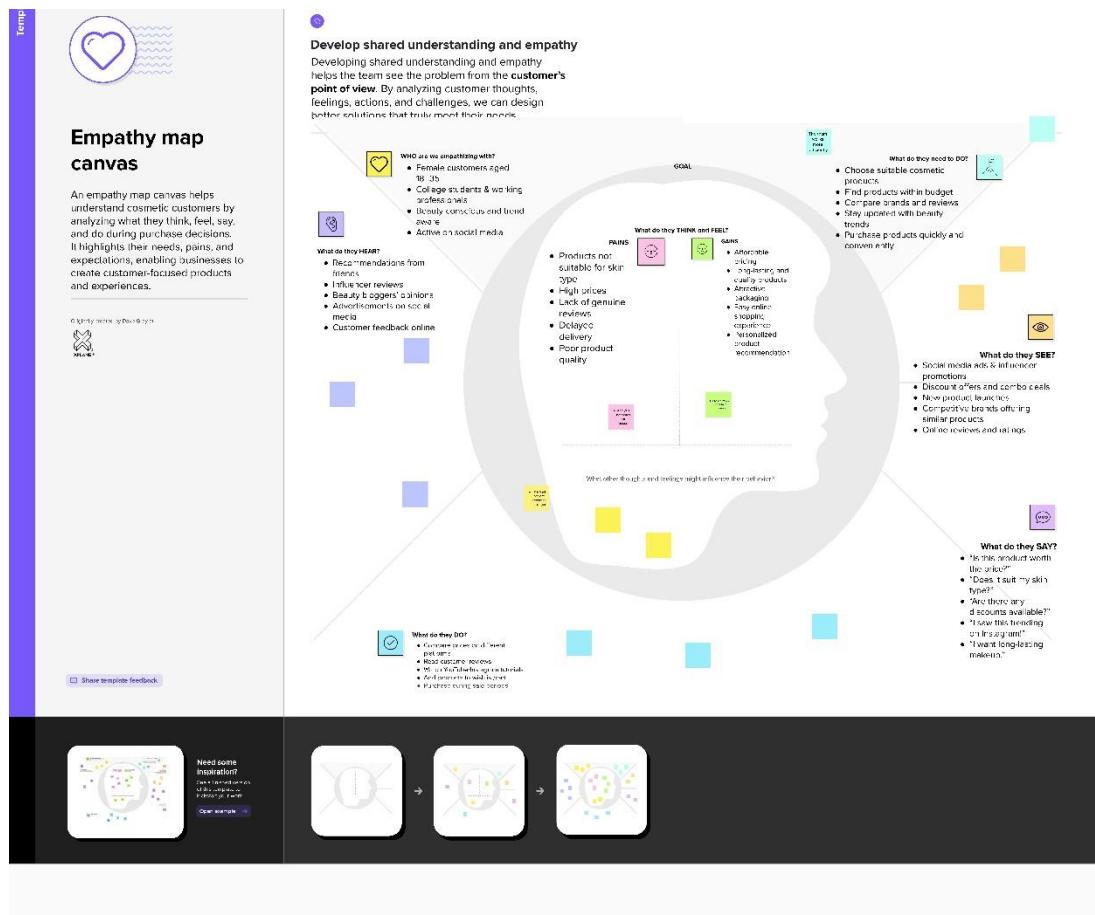
- This project is designed to:
- Improve efficiency, performance, or user experience.
- Provide a structured approach to solving the identified problem.
- Create sustainable and scalable solutions.
- Ultimately, the project seeks to make a meaningful impact by delivering results that benefit stakeholders and contribute to continuous improvement.

2. IDEATION PHASE

2.1 Problem Statement:-



2.2 Empathy Map Canvas:



2.3 Brainstorming:-

template



Brainstorm & idea prioritization

Use this template to brainstorm ideas and prioritize them. Encourage creative thinking and focus on improving sales, customer satisfaction, and product performance.

10 minutes in preparation
1 hour to collaborate
2-8 people recommended

Before you collaborate

A step-by-step guide to prepare for your session:

- 1. Set the goal
- 2. Define your problem statement
- 3. Team gathering
- 4. Learn how to use the facilitation tools

10 minutes

Define your problem statement

Frame your problem as a clear question:

- How might we increase sales of underperforming cosmetic products?
- How can we improve customer satisfaction based on purchase trends?

5 minutes

Team gathering

Decide who will participate:

- Self-select members
- Using visual cues
- Using a poll

Set the goal

Clearly define what problems you want to overcome during the session.

Remember: the goal is specific and measurable.

Learn how to use the facilitation tools

Facilitation tools include:

- Sticky notes
- Post-it notes
- Marker pens

Key rules of brainstorming

To run an effective and productive session:

- Stay on topic.
- Encourage wild ideas.
- Avoid judgment.
- Listen to others.
- Go for volume.
- If possible, have a timer.

Need some inspiration? Search for templates or browse our library of ideas.

[Open examples →](#)

1 Brainstorm

What opportunities that can be turned into ideas to address your problem statement based on the two metrics selected.

⌚ 10 minutes

2 Group Ideas

Take turns sharing your ideas with a cluster in clockwise or counter-clockwise direction as you go. Once all ideas have been captured, cover each cluster and review the cluster's ideas. Then sit back to review and see if you can bundle them into sub-groups.

⌚ 20 minutes



1 Prioritize

You should all select the same page about what's important moving forward. Place your dotline on the matrix to become the most ideas on paper and easiest to see.

⌚ 20 minutes

2 After you collaborate

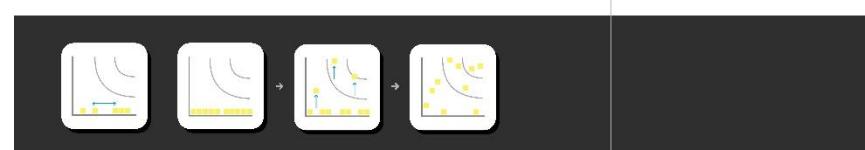
Save your dotline to your board as an image or PDF to share with your manager or stakeholders who may find it helpful. Summarize the key findings from your Brainstorm & Prioritize session and prepare a short report.

Quick add-ons

- Share the matrix: Share the matrix to your team and stakeholders to gather feedback and more suggestions on what to do next.
- Export template: Download the matrix as an image file.

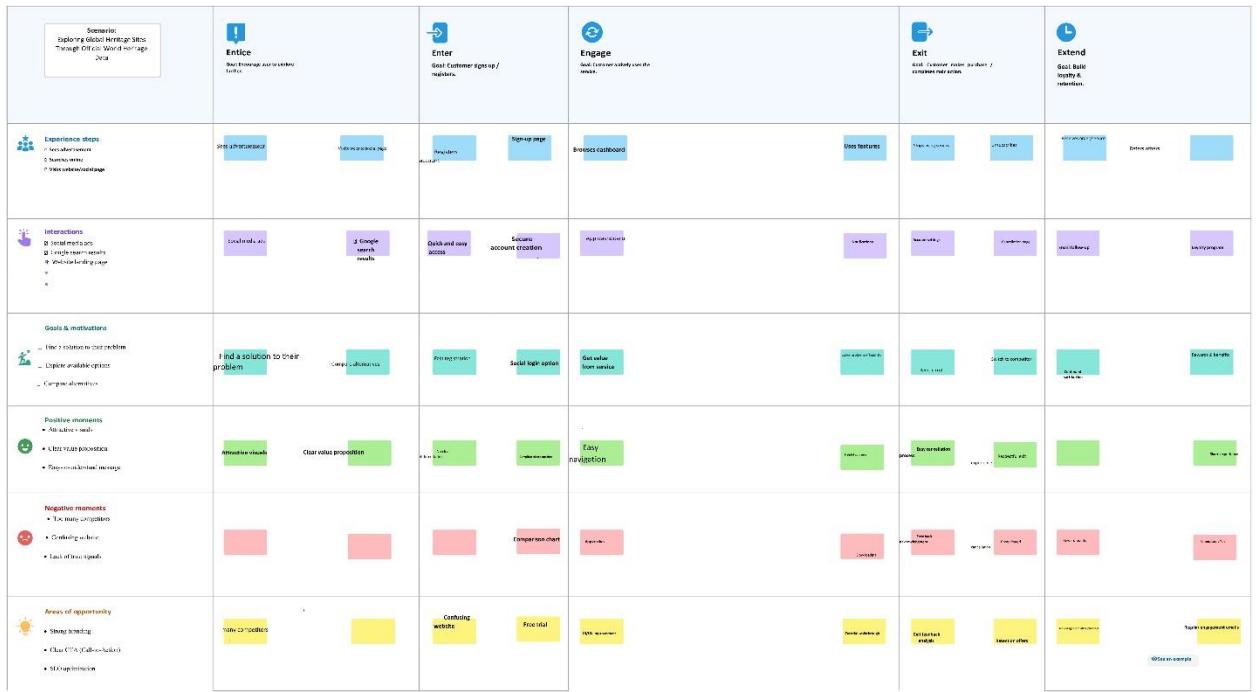
Keep moving forward

- Strategy Blueprint: Create a document in a new line of activity.
- Open the template →
- Customer Experience Blueprint: A document to help you identify and prioritize customer needs.
- Open the template →
- Drawings, schematics, opportunities & threats: Use this template to take notes about risks, opportunities, and threats.
- Open the template →



3. REQUIREMENT ANALYSIS

3.1 Customer Journey map:-



3.2 Solution Requirement:-

Project Design Phase-II
Solution Requirements (Functional & Non-functional)

Date	20 february 2026
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Maximum Marks	4 Marks

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form Registration through Gmail Registration through LinkedIn
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	User login	Confirmation via Email Confirmation via OTP Account activation link
FR-4	User Dashboard / Profile Management	View profile details Edit profile information Upload profile picture Logout option

Non-functional Requirements:

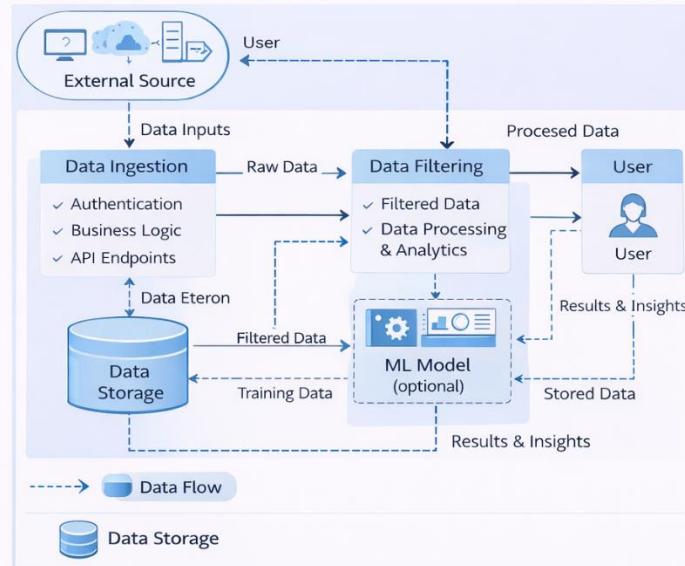
Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	The system should be easy to use with a simple and user-friendly interface so users can complete tasks without confusion.
NFR-2	Security	User data must be protected using encryption, secure authentication, and role-based access control
NFR-3	Reliability	The system should function properly without crashes and provide accurate results consistently.
NFR-4	Performance	The system should load pages within 2–3 seconds and handle multiple users simultaneously without delay.
NFR-5	Availability	The system should be available 24/7 with minimal downtime for maintenance.
NFR-6	Scalability	The system should support increasing users and data without affecting performance.

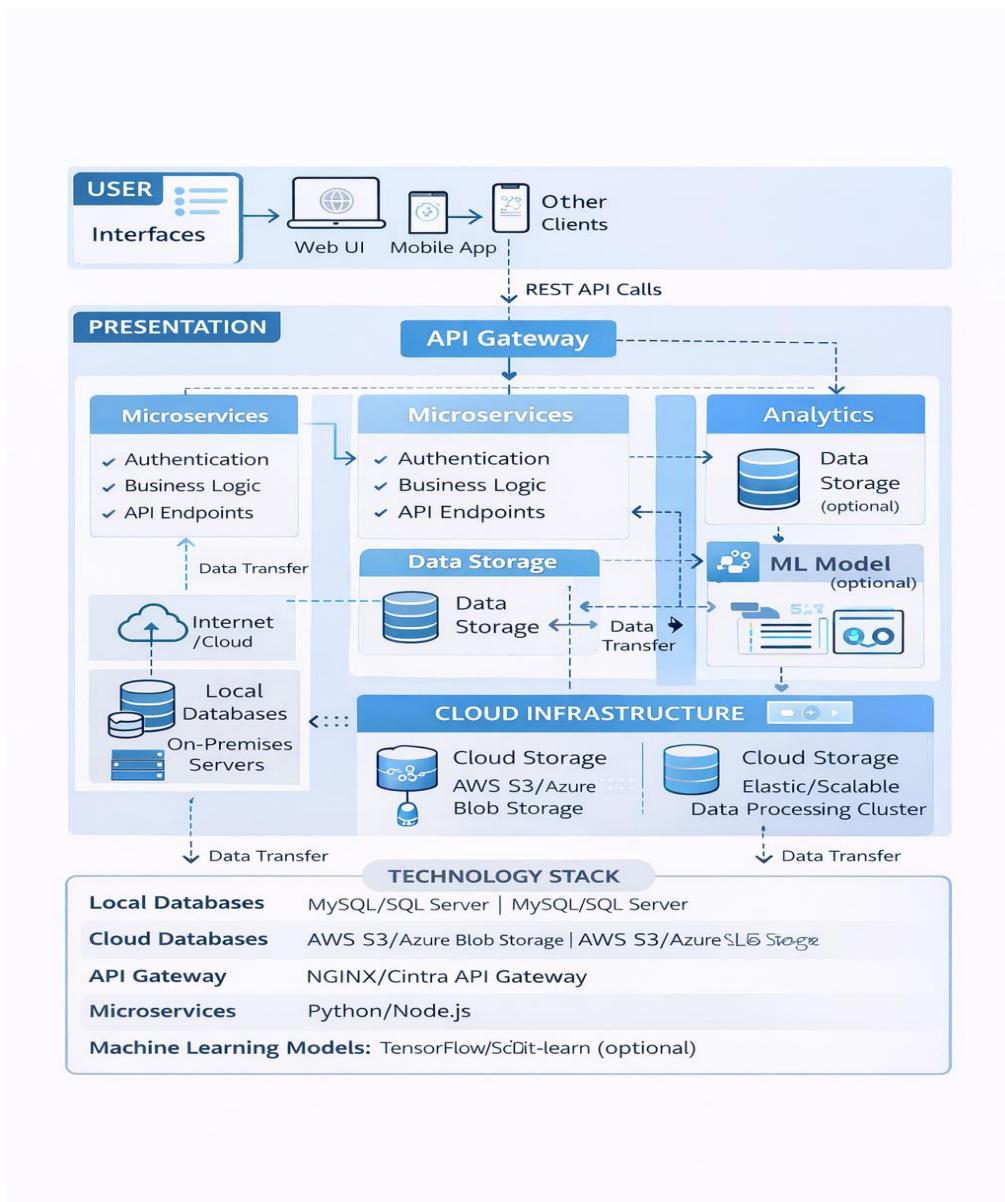
3.3 Data Flow Diagram:-

Data Flow Diagram (DFD)

A Data Flow Diagram (DFD) is a visual representation of the information flow within a system. A neat and clear DFD can depict the right amount of detail transparently, show how data enters, moves within, gets processed, and is stored.



3.4 Technology Stack:-



4. PROJECT DESIGN

4.1 Problem Solution Fit:-

1.CUSTOMER SCENARIO (CS)	8.EMOTIONS (EM)	4.JOBS TO BE DONE / PROBLEMS (JB)
<ul style="list-style-type: none"> A working professional/student frequently faces difficulty managing daily tasks (orders, appointments, services, learning, etc.). They rely on multiple apps and manual tracking, leading to confusion, delays, and inefficiency. 	<ul style="list-style-type: none"> Before Using Solution: Frustrated Confused Overwhelmed Stressed After Using Solution: Confident Relaxed 	<ul style="list-style-type: none"> Manage tasks/orders easily Track progress in real time Get reminders & updates Access support quickly Make secure payments Save time and effort
2.CUSTOMER CONSTRAINTS (CC)	7.TRIGGERS (TR)	5.PROBLEM ROOT CAUSE (RC)
<ul style="list-style-type: none"> Limited time Budget constraints Low technical knowledge Trust & security concerns Poor internet connectivity (sometimes) Device limitations 	<ul style="list-style-type: none"> Urgent need Promotional offers Referral from friend Advertisement Reminder notification 	<ul style="list-style-type: none"> Fragmented systems Lack of integration Poor UX design Limited automation Lack of personalization Insufficient data analytics
3.AVAILABLE SOLUTIONS (AS)	9.YOUR SOLUTION (YS)	6.BEHAVIORS (B)
<ul style="list-style-type: none"> Multiple separate apps Manual tracking (notes, Excel, reminders) Competitor platforms Social media groups Offline services Limitations of existing solutions: Not centralized Complicated UI 	<ul style="list-style-type: none"> A centralized, user-friendly digital platform that: Integrates multiple services in one place Provides real-time tracking Offers secure payment gate Provides 24/7 support 	<ul style="list-style-type: none"> Switches between multiple apps Frequently forgets tasks Looks for quick alternatives Compares multiple services Abandons process if too complex

4.2 Proposed Solution:-

Project Design Phase-I
Proposed Solution Template

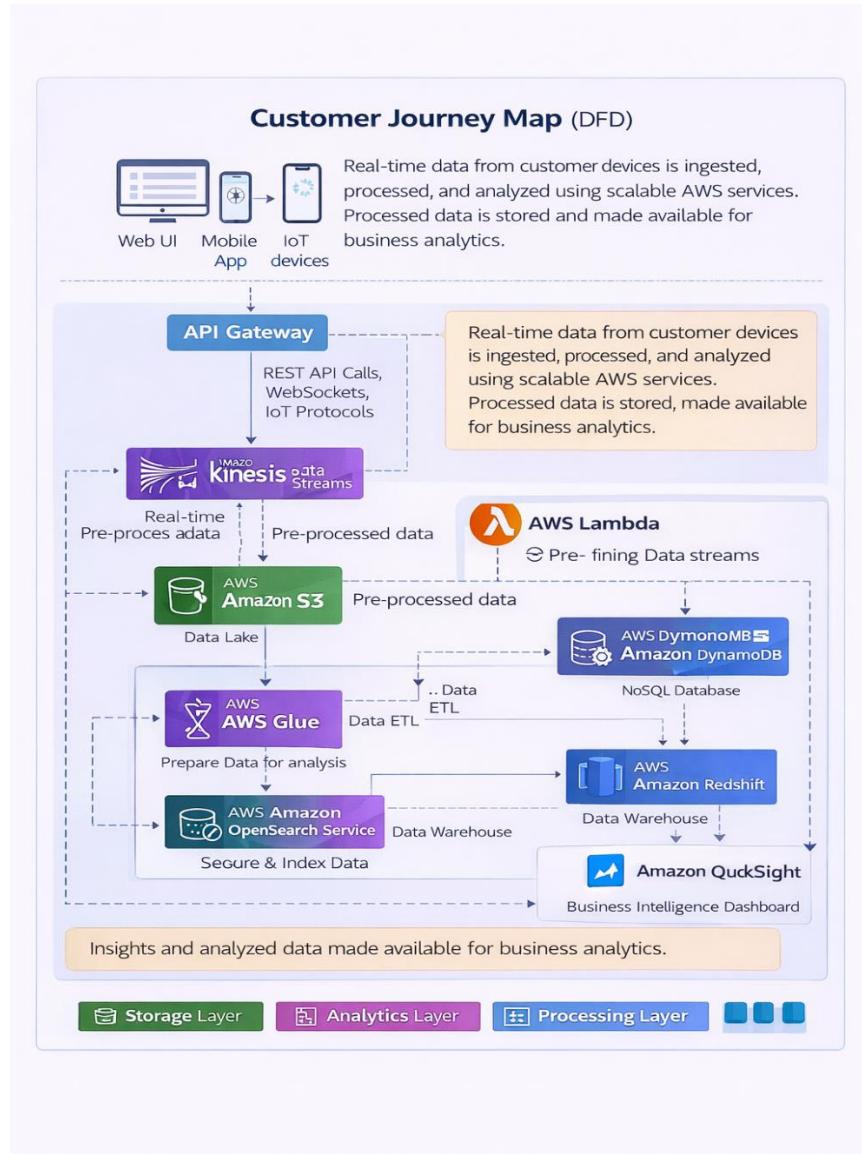
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Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Many users face difficulty managing registrations, confirmations, and account access due to complex processes, lack of proper authentication systems, and poor user interface. There is a need for a secure, simple, and centralized application that allows smooth registration, login, and dashboard management.
2.	Idea / Solution description	The proposed solution is a user-friendly mobile and web application that enables users to register, confirm accounts via email/OTP, login securely, and manage their profile through a personalized dashboard. The system includes admin and customer care modules for monitoring and user support.
3.	Novelty / Uniqueness	The system provides integrated multi-platform access (mobile + web), social media login options, real-time email confirmation, secure authentication, and a simple UI design. It combines ease of use with strong security and role-based access control.
4.	Social Impact / Customer Satisfaction	The solution improves digital accessibility, reduces user frustration, enhances data security, and increases user confidence. It ensures smooth account management and faster support response, leading to high customer satisfaction.
5.	Business Model (Revenue Model)	The application can generate revenue through subscription plans, premium features, advertisements, and partnership integrations. Businesses can also use analytics features for better customer insights.
6.	Scalability of the Solution	The system is designed using scalable architecture that supports increasing users and data growth. It can handle high traffic and expand features without affecting performance. Cloud-based infrastructure ensures long-term scalability.

4.3 Solution Architecture:-



5. PROJECT PLANNING & SCHEDULING

5.1 Project Planning:-

Project Planning Phase
Project Planning Template (Product Backlog, Sprint Planning, Stories, Story points)

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Maximum Marks	8 Marks

Product Backlog, Sprint Schedule, and Estimation (4 Marks)

Use the below template to create product backlog and sprint schedule

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	2	High	Akhil
Sprint-1		USN-2	As a user, I will receive confirmation email once I have registered for the application	1	High	Sushma
Sprint-2		USN-3	As a user, I can register for the application through Facebook	2	Low	Deepthi
Sprint-1		USN-4	As a user, I can register for the application through Gmail	2	Medium	Sanjana
Sprint-1	Login	USN-5	As a user, I can log into the application by entering email & password	1	High	Sushma
Sprint-2	Dashboard	USN-6	As, a user, I can view my dashboard after login	2	High	Sanjana
Sprint-2	Dashboard	USN-7	As an admin, I can manage users and view reports.	3	Medium	Deepthi

Project Tracker, Velocity & Burndown Chart: (4 Marks)

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (as on Planned End Date)	Sprint Release Date (Actual)
Sprint-1	20	6 Days	05 Dec 2026	10 Dec 2026	20	10 Dec 2022
Sprint-2	20	6 Days	19 Dec 2026	24 Dec 2026	20	24 Dec 2026
Sprint-3	20	6 Days	09 Jan 2026	14 Jan 2026	20	14 Jan 2026
Sprint-4	20	6 Days	30 Jan 2026	04 Feb 2026	20	04 Feb 2026
Sprint-5	20	6 Days	13 Feb 2026	18 Feb 2026	20	18 Feb 2026

Velocity:

Imagine we have a 10-day sprint duration, and the velocity of the team is 20 (points per sprint). Let's calculate the team's average velocity (AV) per iteration unit (story points per day)

$$AV = \frac{\text{sprint duration}}{\text{velocity}} = \frac{20}{10} = 2$$

6. FUNCTIONAL AND PERFORMANCE TESTING

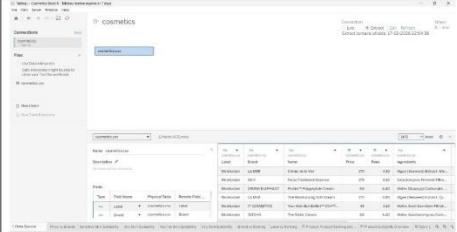
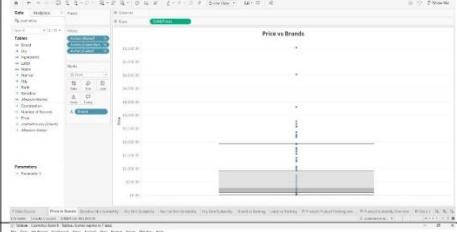
6.1 Performance Testing:-

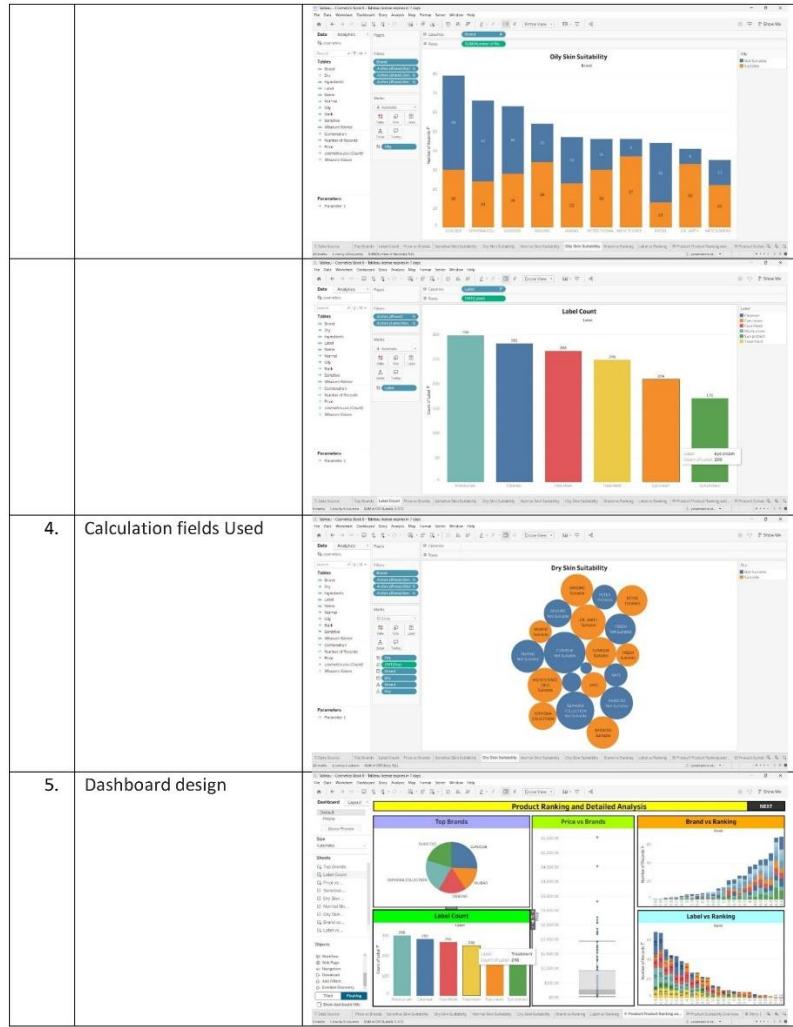
Project Development Phase Performance Test

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Maximum Marks	

Model Performance Testing:

Project team shall fill the following information in model performance testing template.

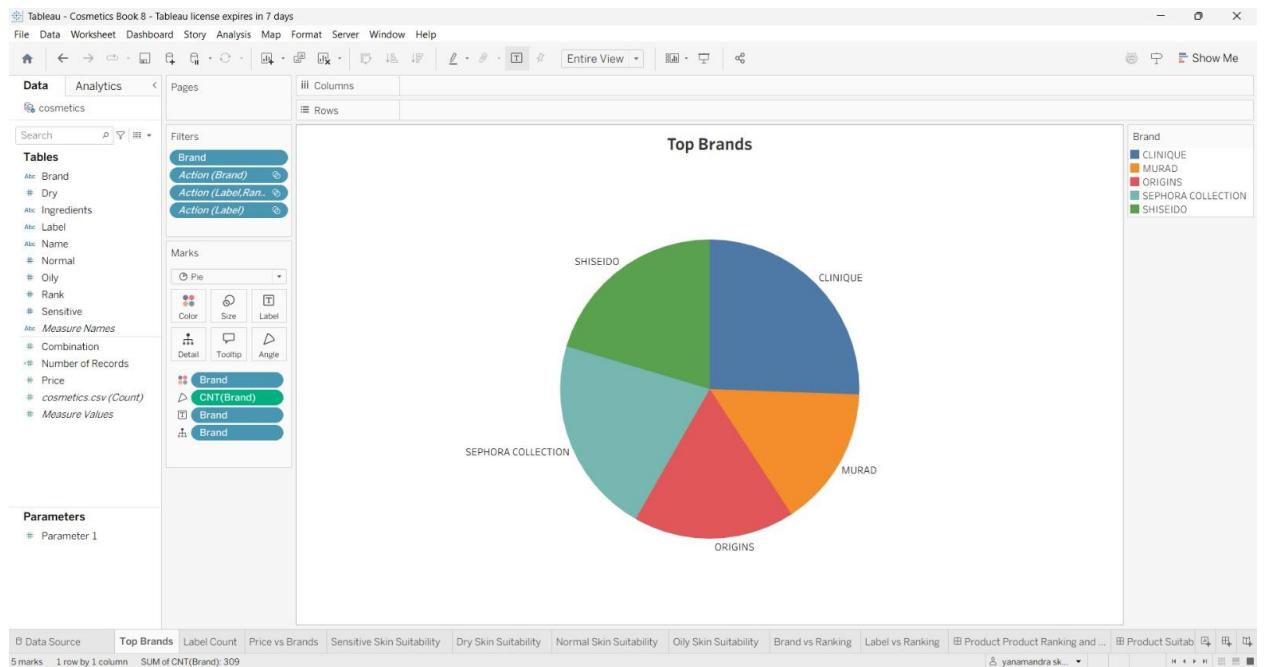
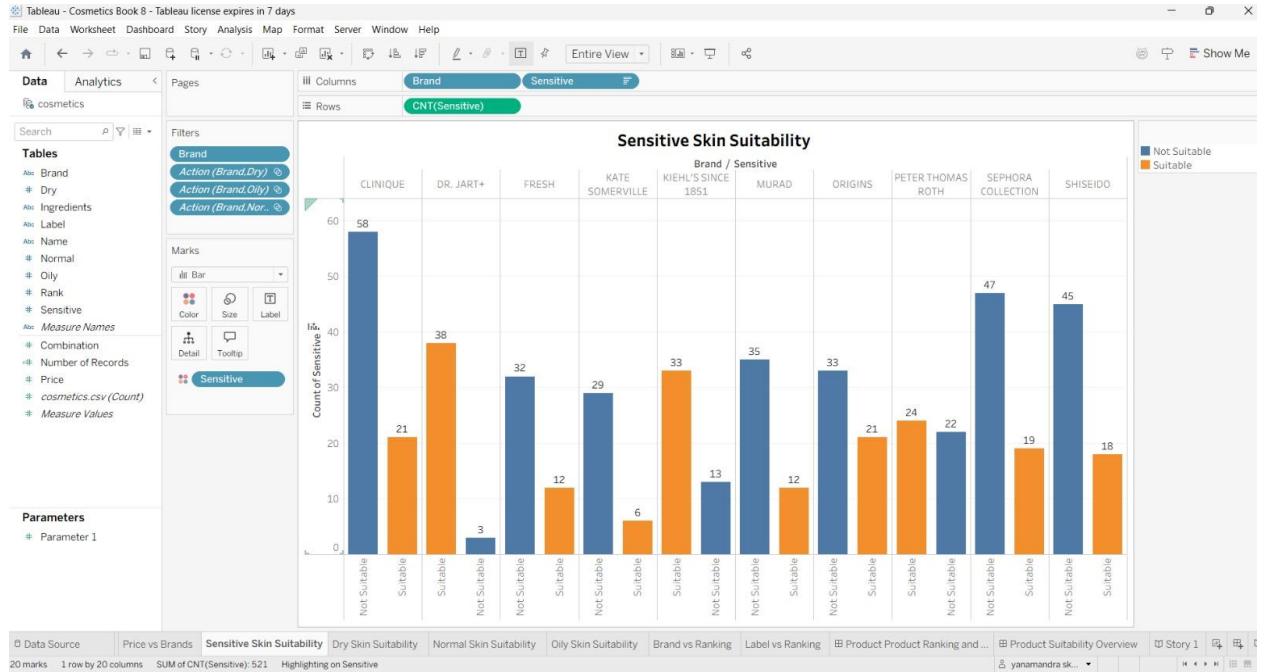
S.No.	Parameter	Screenshot / Values
1.	Data Rendered	
2.	Data Preprocessing	
3.	Utilization of Filters	

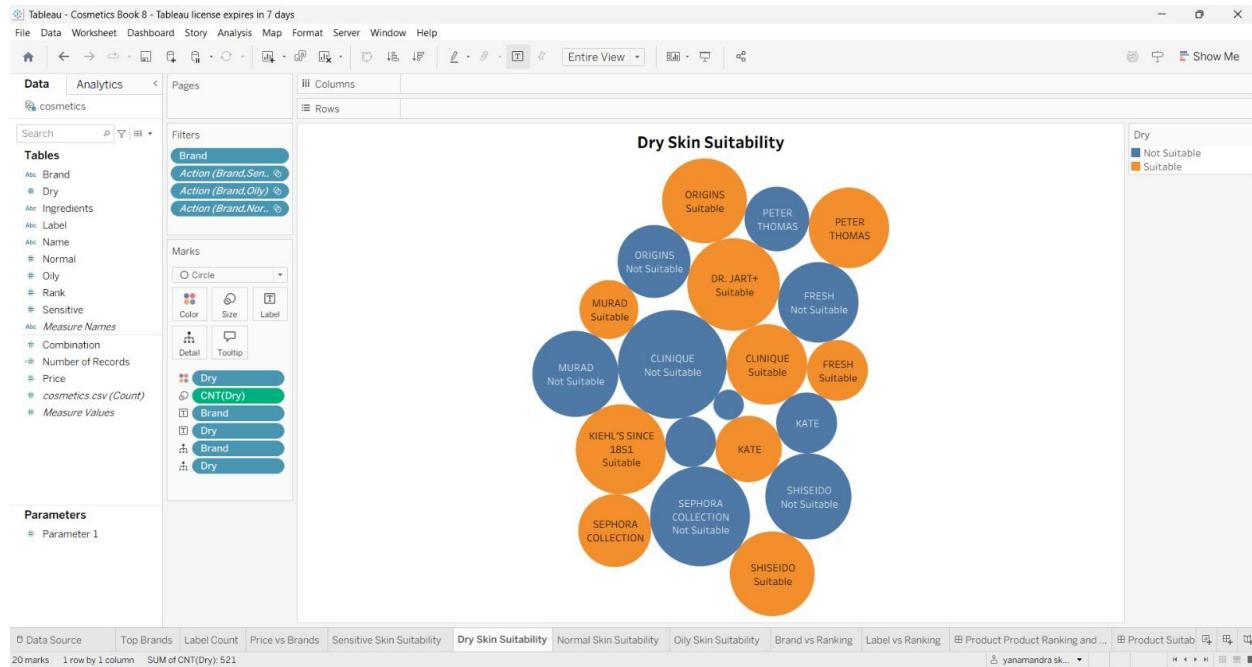
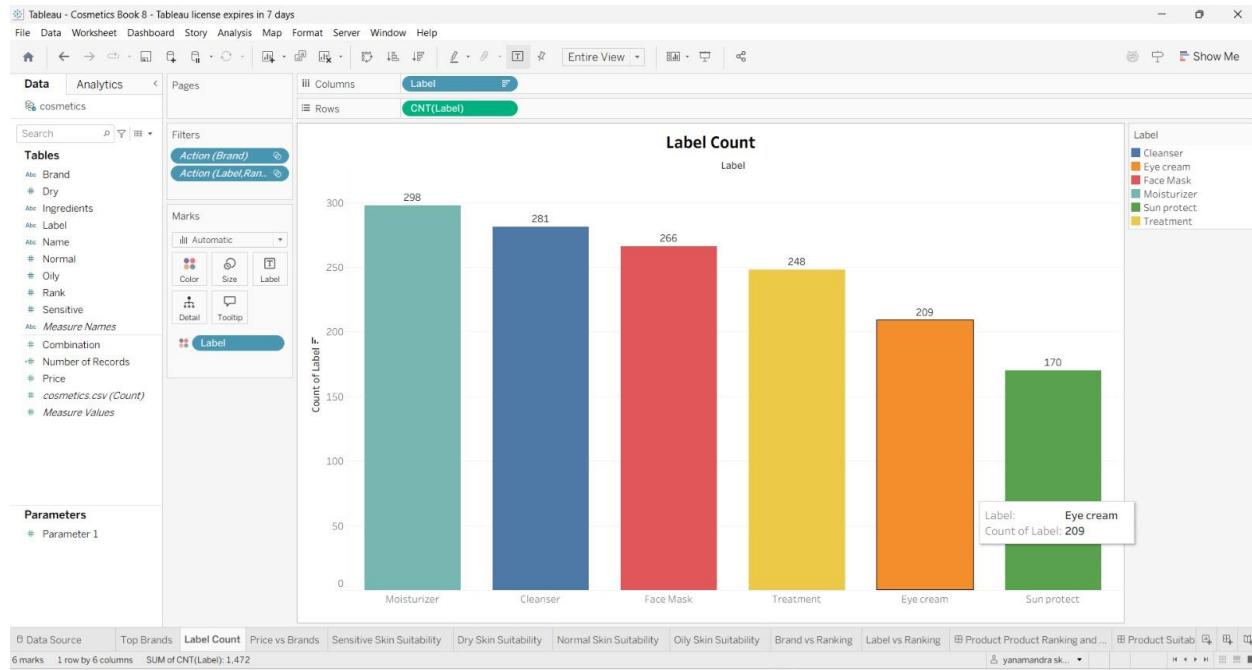


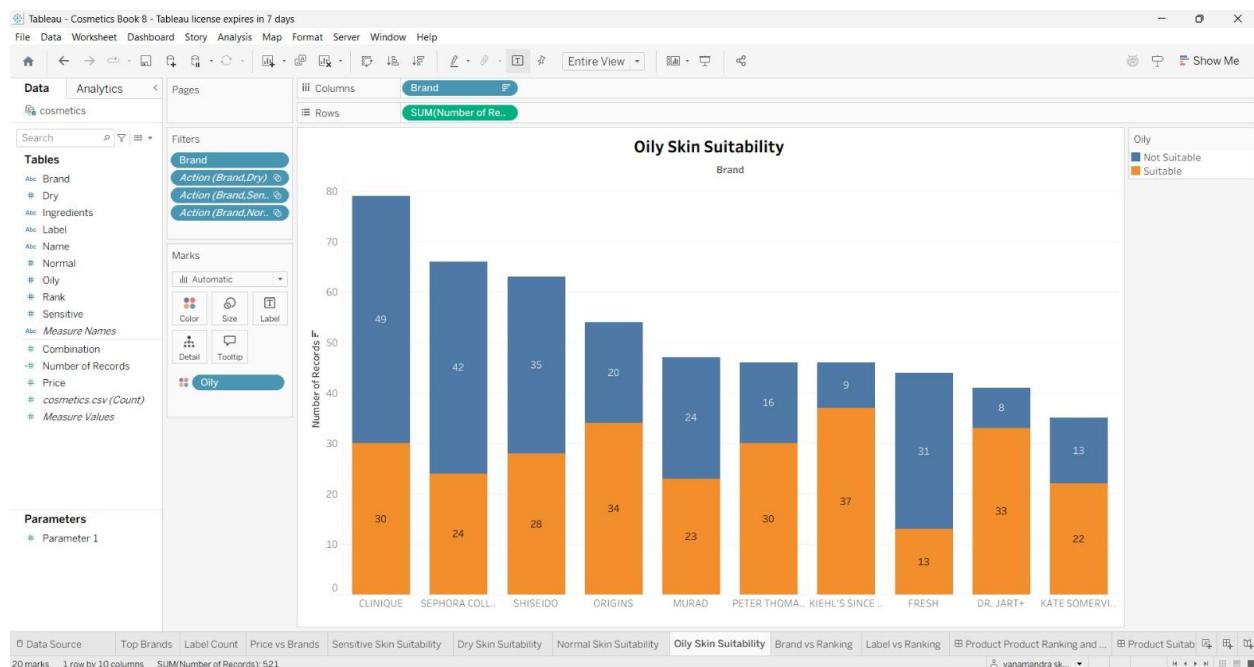
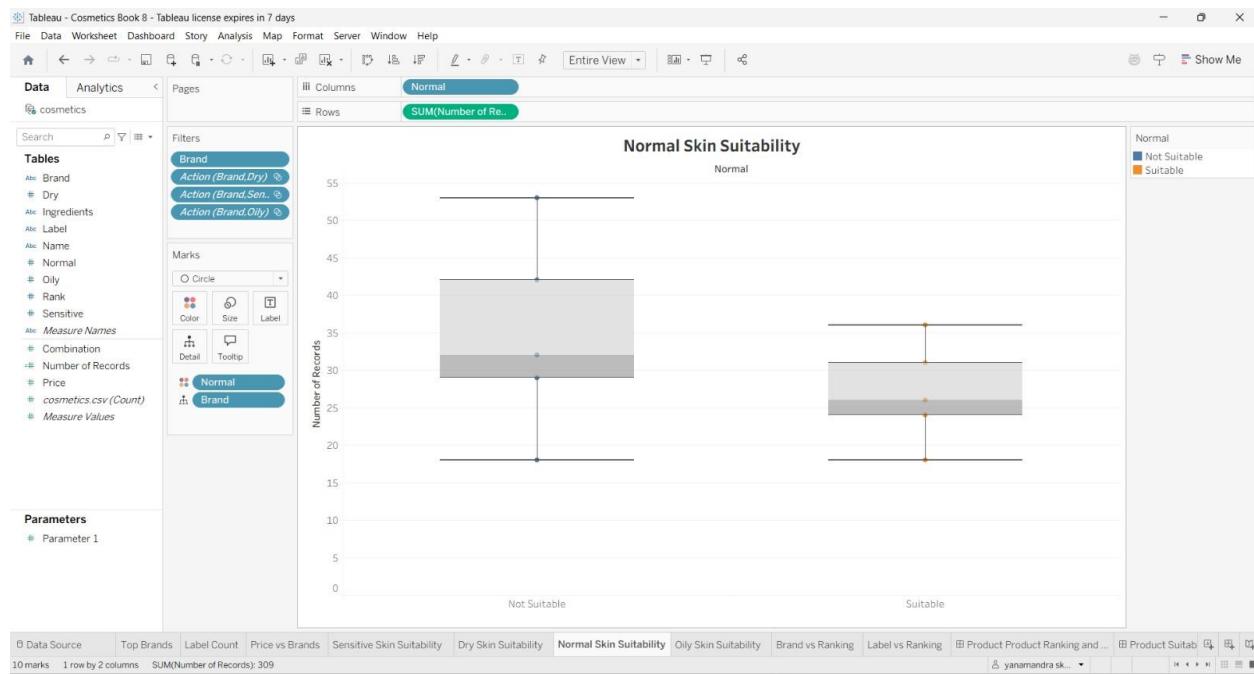


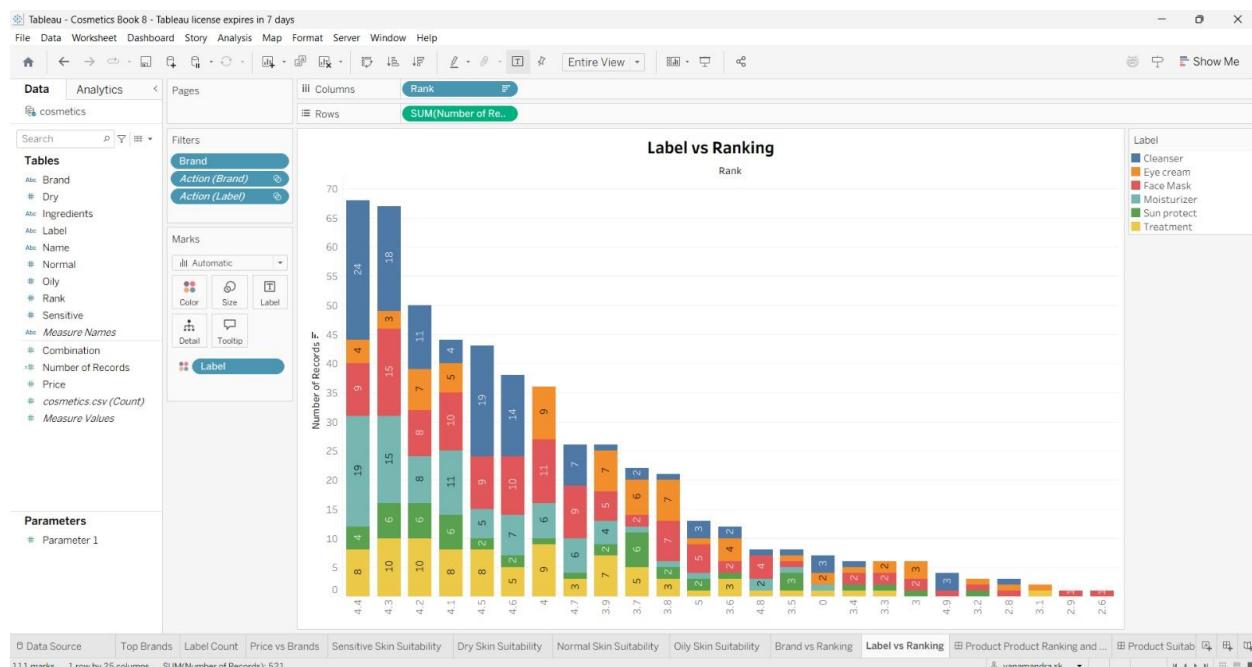
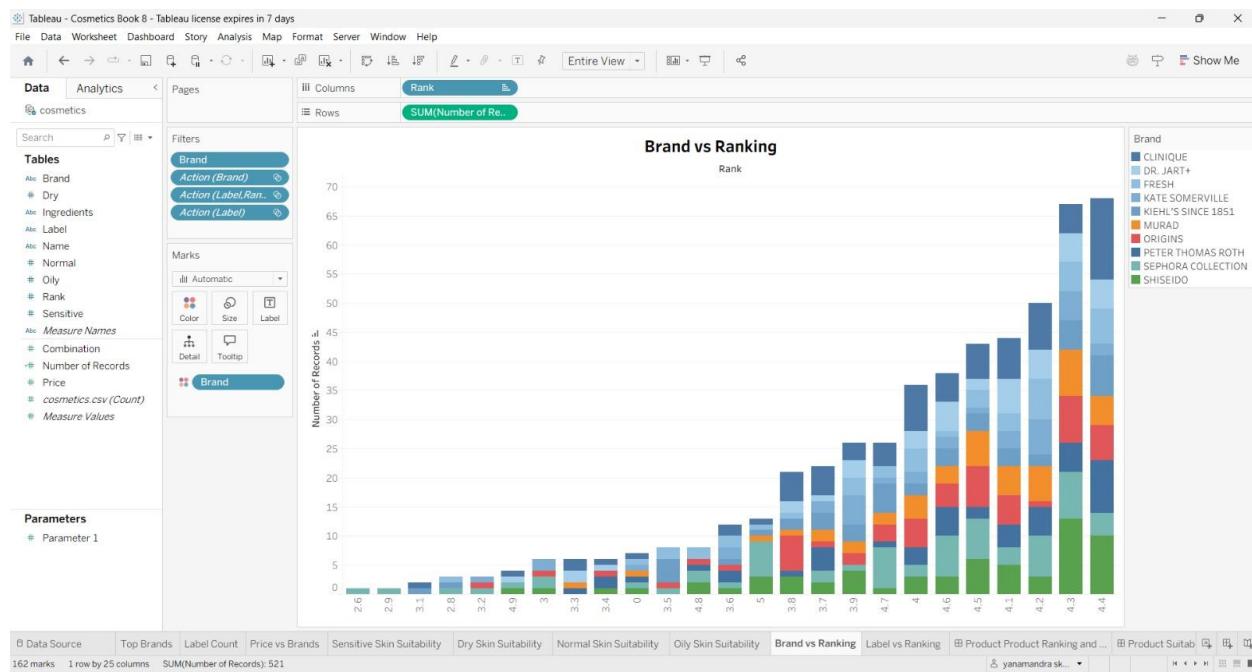
6. RESULTS

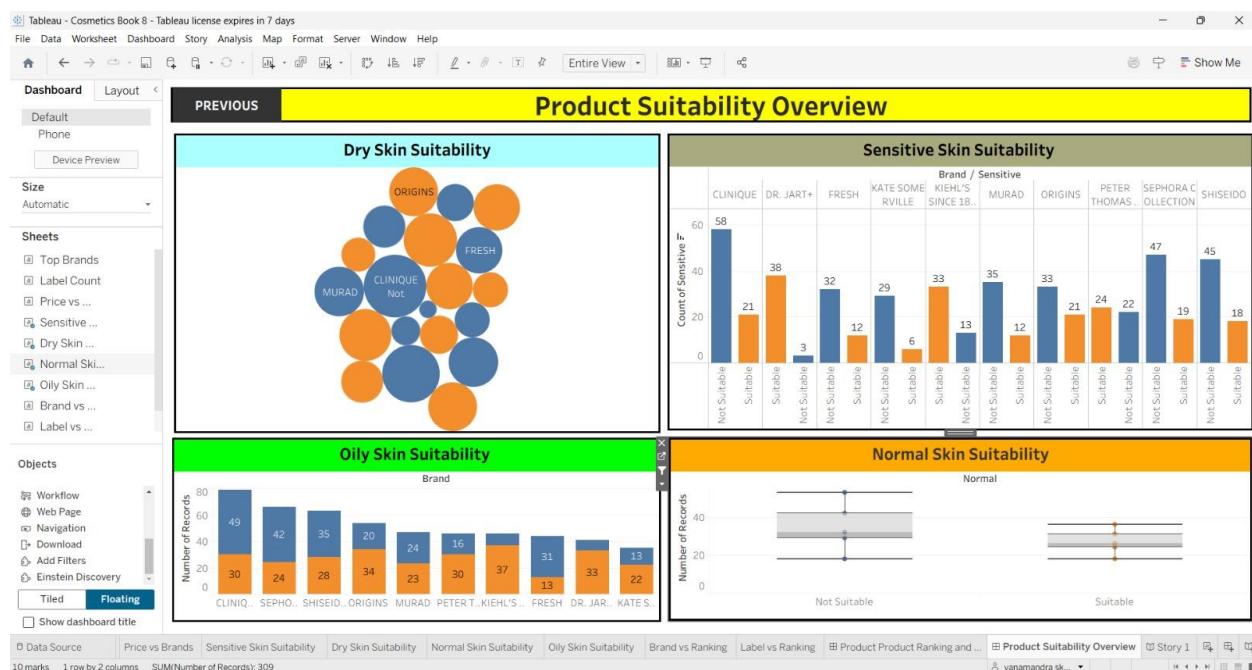
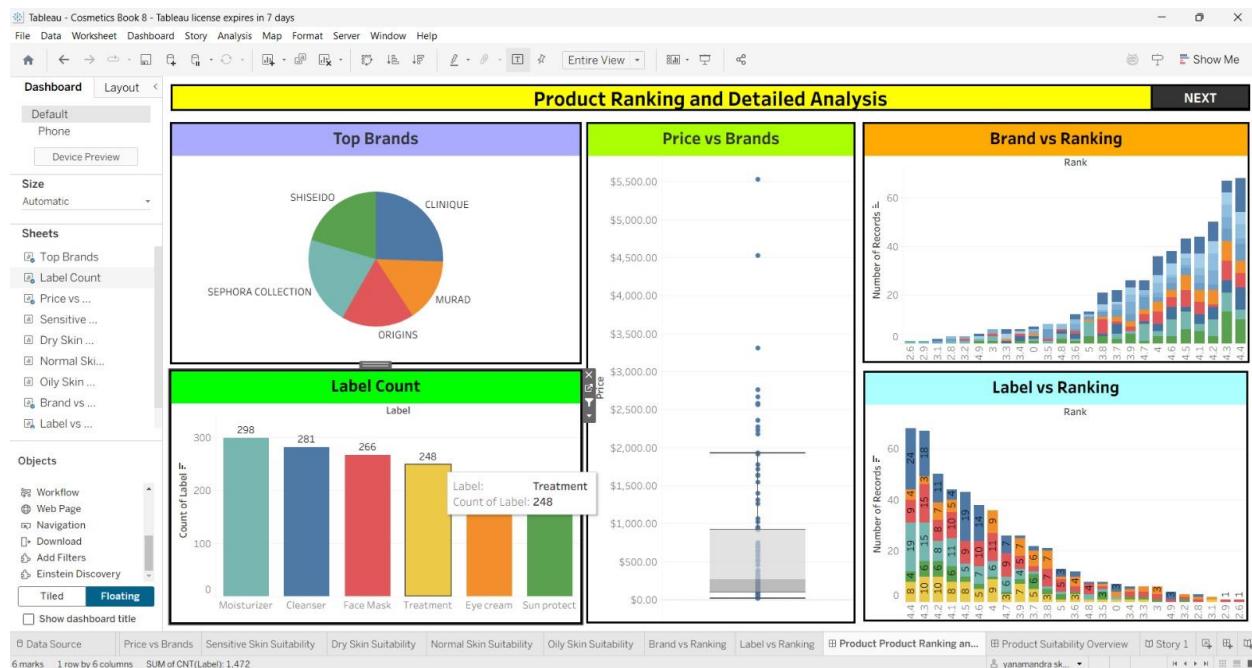
7.1 Output Screenshots:-

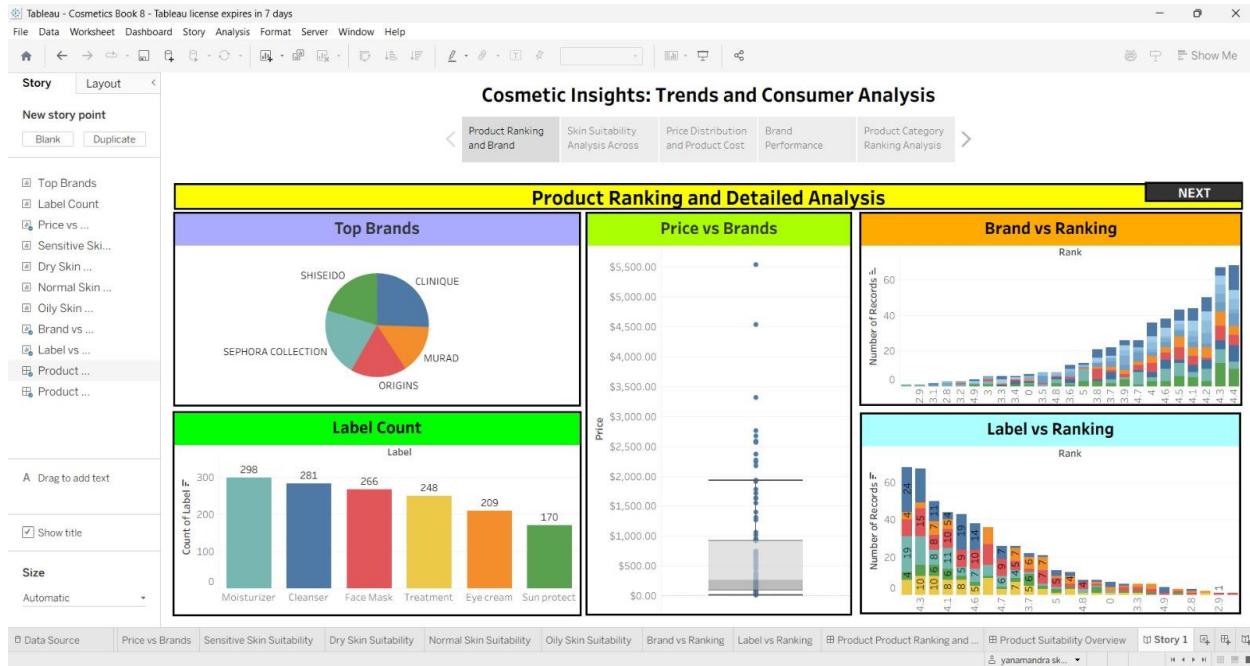












8. ADVANTAGES & DISADVANTAGES

ADVANTAGES:-

- Faster Delivery:-** Work is delivered in short sprints, allowing features to be released quickly and regularly.
- Better Planning & Tracking:-** Sprint planning, velocity, and burndown charts help track progress clearly and reduce delays.
- Improved Quality:-** Continuous testing and reviews in every sprint help identify and fix defects early.
- High Flexibility:-** Changes in requirements can be easily accommodated in upcoming sprints.
- Customer Satisfaction:-** Regular releases allow users to give feedback early, leading to better alignment with customer needs.
- Risk Reduction:-** Problems are identified early in the development cycle, reducing project risks

DISADVANTAGES:-

- Health-Related Issues:-** Presence of harmful chemicals like parabens, sulfates, and artificial fragrances may affect long-term health.
- High Cost :-** Branded cosmetic products are often expensive . Customers may spend a large portion of income on beauty products.

3. **Environmental Impact:-** Plastic packaging leads to environmental pollution. Chemical waste from production affects water and soil.
4. **Animal Testing Issues:-** Some cosmetic companies test products on animals. Raises ethical and cruelty concerns.
5. **Unrealistic Beauty Standards:-** Promotes artificial beauty expectations. Can reduce self-confidence among users. Influences mental health negatively, especially among youth.
6. **Short Product Life Cycle:-** Many products have short expiry dates. Leads to product wastage. Frequent launches create unnecessary consumption.

9. CONCLUSION

In conclusion, the cosmetics industry shows strong growth and high consumer demand driven by changing beauty trends, brand influence, and increasing awareness about personal care. The dataset highlights that product categories such as skincare and makeup contribute significantly to overall sales, especially in premium and branded segments.

However, despite its growth, the industry also faces challenges like high competition, price sensitivity, environmental concerns, and health-related risks associated with certain ingredients. Consumer preferences are rapidly changing, and brands must focus on quality, safety, sustainability, and innovation to remain competitive.

Overall, the cosmetics market presents strong business opportunities, but companies must balance profitability with ethical

10. FUTURE SCOPE

The future scope of the cosmetics industry is very promising due to increasing consumer awareness, technological advancements, and growing demand for natural and organic products. The expansion of e-commerce platforms and social media marketing has made beauty products more accessible to customers worldwide. Innovations such as AI-based skin analysis and virtual makeup trials are transforming the industry. Additionally, the rising demand for sustainable packaging and eco-friendly products creates new growth opportunities. The increasing interest in male grooming and emerging global markets further strengthens the future potential of the cosmetics sector. Overall, the industry is expected to grow continuously with innovation and sustainability as key drivers.

11. APPENDIX

- ❖ **Data set link:-** Cosmetic Insights : Navigating Cosmetics Trends and Consumer Insights with Tableau

❖ <https://www.kaggle.com/datasets/kingabzpro/cosmetics-datasets>

- ❖ **Tableau public demo link:-**

<https://public.tableau.com/app/profile/yanamandra.skanda.sushma>

- ❖ **Video Demo Link:-**

<https://drive.google.com/file/d/1jyskTzBK-fMRbPqtRDOZRkC7iDWwkBKg/view?usp=drivesdk>