Emma Simmermon

Project Name: Analyzing Guest Preferences to Drive Product Strategy

GitHub Repository:

Job Description

I chose the Guest Data Analyst role at Ulta Beauty because it focuses on using guest-level data to inform marketing and personalization strategies. The job emphasizes SQL, dashboarding, and analyzing loyalty behavior—all aligned with my interests in consumer insights and my goal of becoming a data analyst in beauty or retail.

Problem

The question I'll explore is: What product features and guest preferences are most associated with high ratings and positive reviews in the beauty retail space? This reflects Ulta's goal to use guest data to enhance personalization and improve product strategy. The problem can be solved with SQL, an AWS RDS pipeline, and Tableau dashboards.

Data Sources

API: Sephora Product & Ratings API via RapidAPI

Description: Provides product data (category, price, rating, reviews) for Sephora inventory.

Method: Collected using Python's requests library to access JSON-formatted API responses.

Relevance: Allows analysis of trends in guest ratings by product category and price—helping simulate Ulta's product performance.

Web Scrape: Ulta.com Product Reviews

Description: Reviews include guest name, location, skin type, rating, and written feedback.

Method: Scraped using BeautifulSoup from product pages across categories.

Relevance: Offers direct insight into guest preferences and satisfaction—data Ulta's analysts use to drive marketing and product decisions.

Solution

I will load the API and scraped data into AWS RDS (PostgreSQL), clean and join them by product category and rating. SQL queries will uncover patterns in high-rated products, sentiment trends, and price vs. satisfaction. Tableau dashboards will visualize top-rated categories, feature-based sentiment, and guest review heatmaps—mirroring the work Ulta's analytics team does to drive strategy.