Virtual Closet Platform

A cloud-based, data-driven solution for sustainable fashion.

by Jose De Leon

Project Purpose

1 **Sustainable Fashion**

Mobile and web app for managing second-hand clothing.

2 **AI and AR**

Organize wardrobe and virtually try on clothes.

3 **Inspiration**

Inspired by the shift towards sustainable choices.

Target users

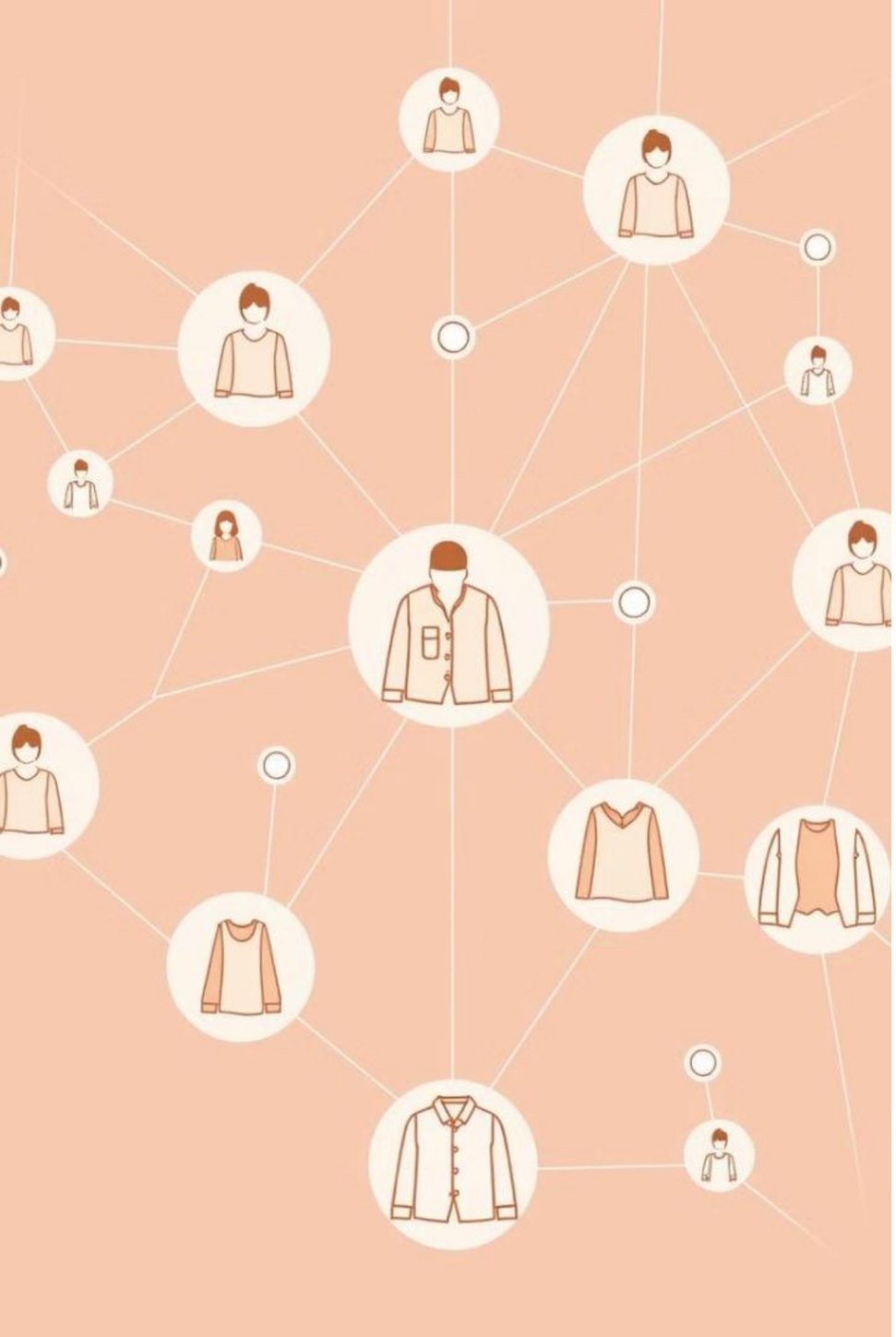
Fashion Influencers

Budget-Savvy Students

Eco-Conscious Shoppers

Business...

The core features are free, and the business model relies on small commissions from peer-to-peer transactions.



Business Rules

Ownership

Users own clothing items.

Transactions

Items in outfits or transactions.

Social

Likes, comments, and reviews.

Transactions

Include at least one item and a buyer and a seller.

Clothing item

Reused across many Looks and multiple Transactions.

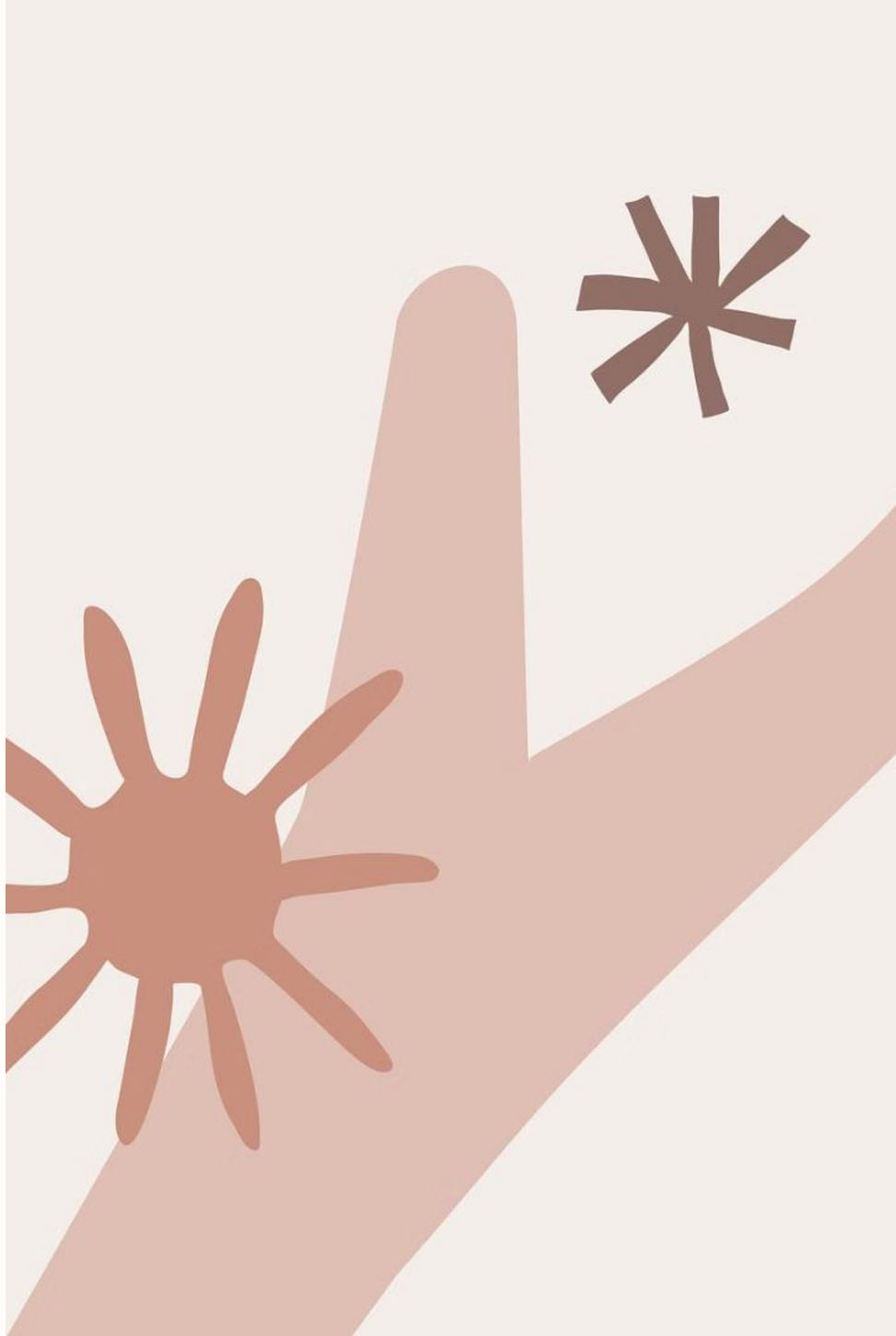
Database Structure

Key Tables

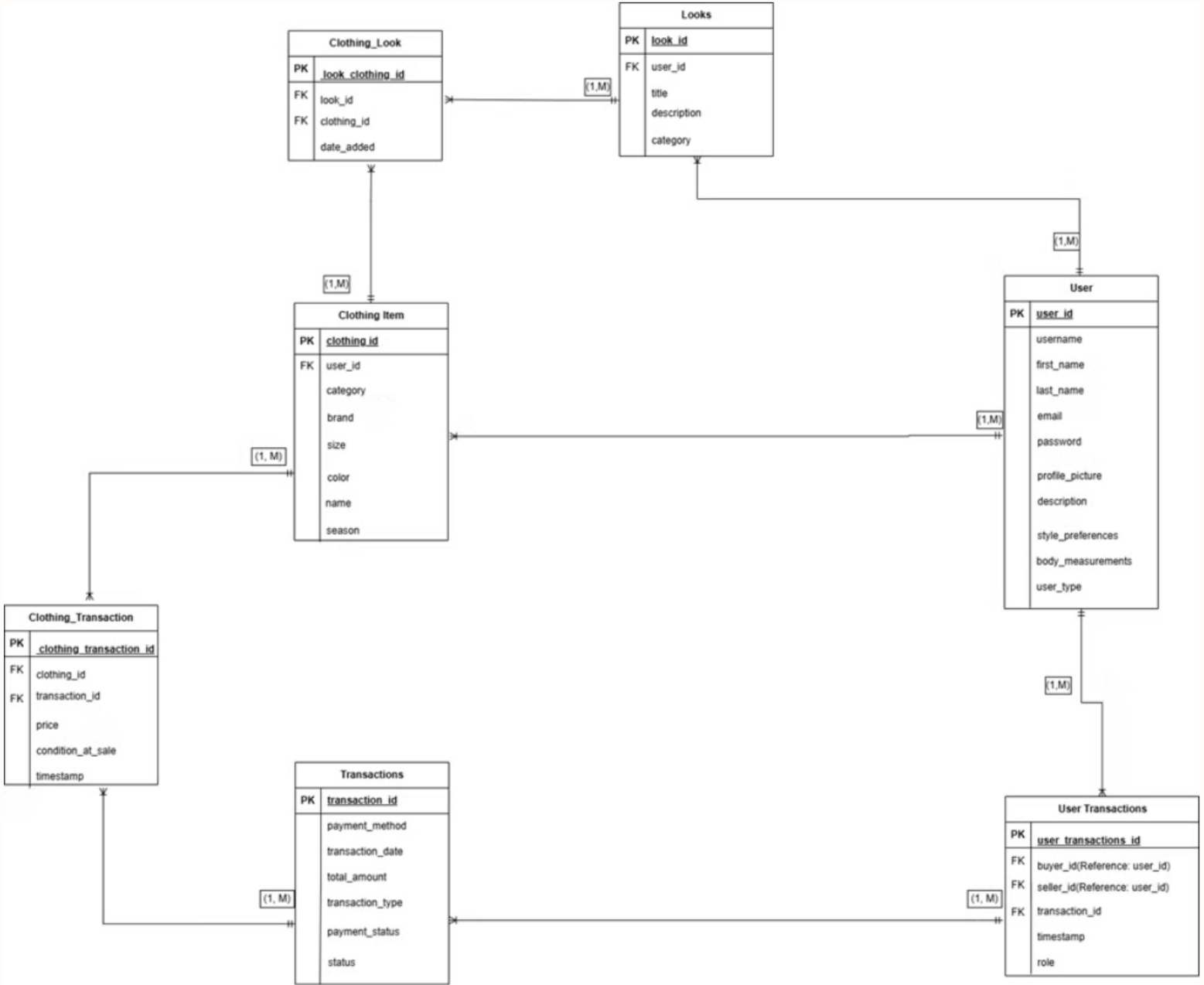
- Users
- Clothing Items
- Looks
- Transactions

Bridge Tables

- Users_Transactions
- Clothing_Look
- Clothing_Transaction



ER diagram


Clothing_Look
PK look_clothing_id
FK look_id
FK clothing_id
date_added
Looks
PK look_id
FK user_id
title
description
category
(1,M)
(1,M)
(1,M)
Clothing Item
PK clothing id
FK user_id
category
brand
size
color
name
season
(1, M)
(1,M)
User
PK user_id
username
first_name
last_name
email
password
profile_picture
description
style_preferences
body_measurements
user_type
Clothing_Transaction
PK clothing_transaction_id
FK clothing_id
FK transaction_id
price
condition_at_sale
timestamp
(1,M)
Transactions
PK transaction_id
payment_method
transaction_date
total_amount
transaction_type
payment_status
status
(1, M)
(1, M)
User Transactions
PK user_transactions_id
FK buyer_id(Reference: user_id)
FK seller_id(Reference: user_id)
FK transaction_id
timestamp
role

SQL Implementation

1

User Story

Taylor sells an item.

2

SQL Queries

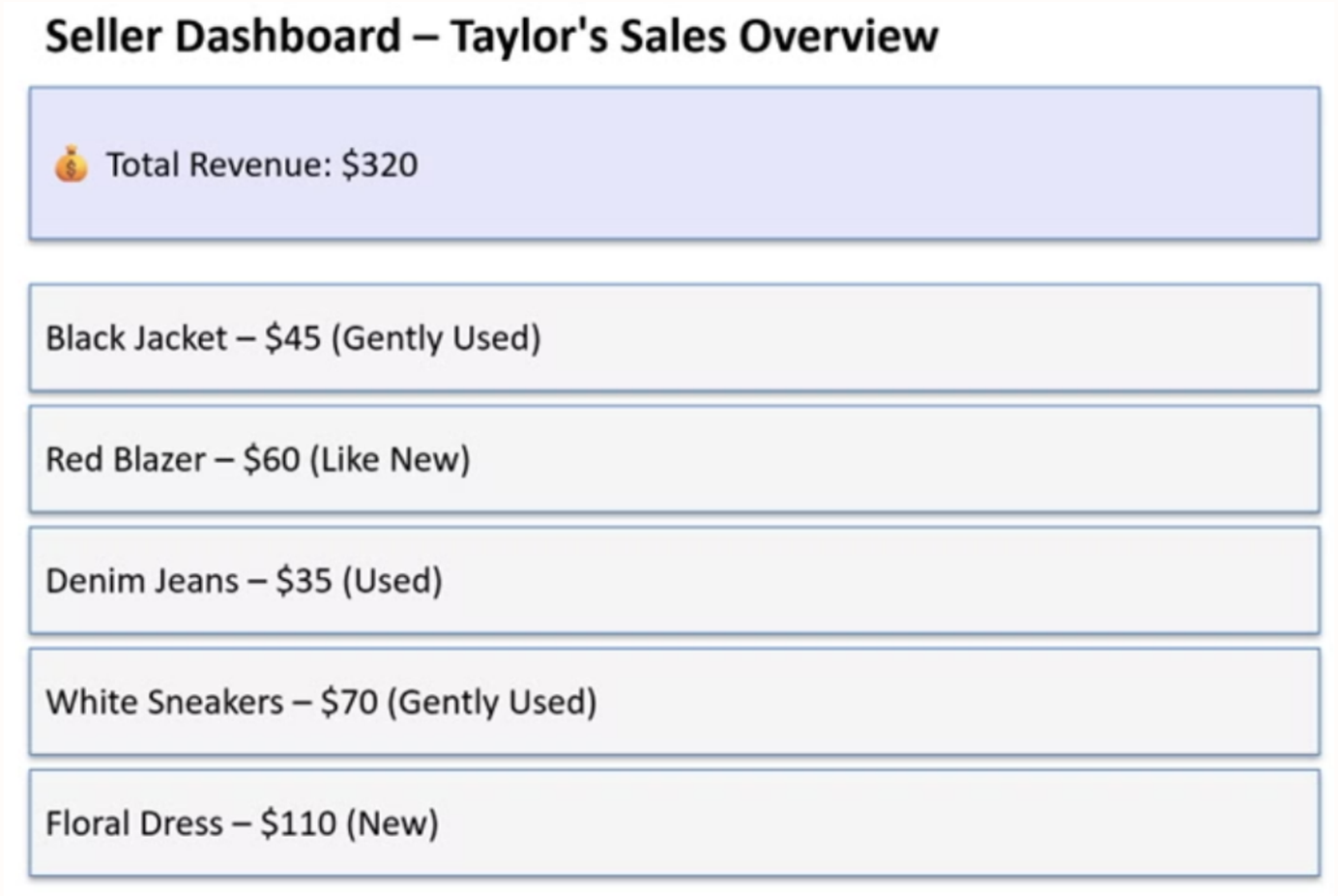
Track transaction details.

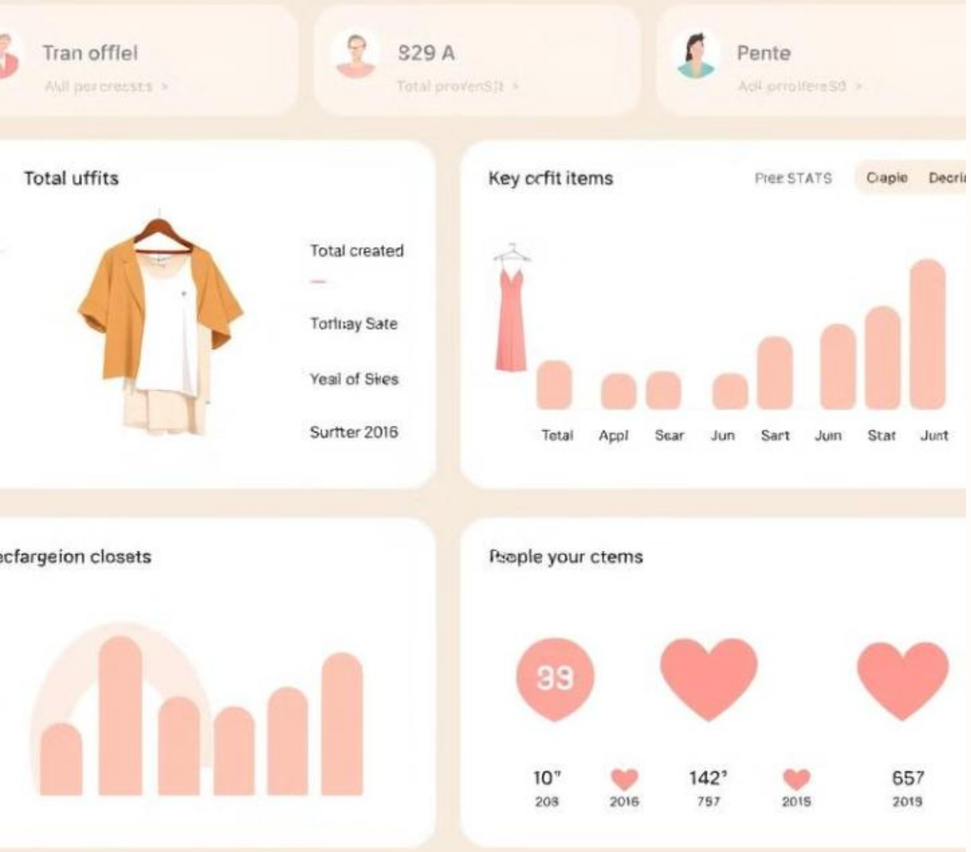
3

Application Needs

Build dashboards, track usage.

Seller Dashboard Powered by SQL Queries





Analytics and Reports

1

Top Sellers

Revenue generation

2

Most Resold

Popular categories

3

Avg Items

Per transaction

4

Most Versatile

Clothing pieces

5

Average price

by item condition

Securing Sensitive Data

- Protecting Personal and Financial Information
  Security is critical for our platform that handles sensitive user data. We've implemented robust measures to protect against vulnerabilities.

1 **Credential Management**

Weak passwords or unattended accounts can be exploited.

2 **Data Access**

Overly broad data access or misconfigured remote entry can lead to breaches.

3 **SQL Injection Prevention**

Are major threats. Use secure coding and input sanitization.

4 **GDPR Compliance**

Fields such as email or measurements might require user consent and privacy disclaimers.

Cloud-Based Three-Tier Architecture

1 **Presentation Layer**

Handles mobile/web app interfaces for user interaction.

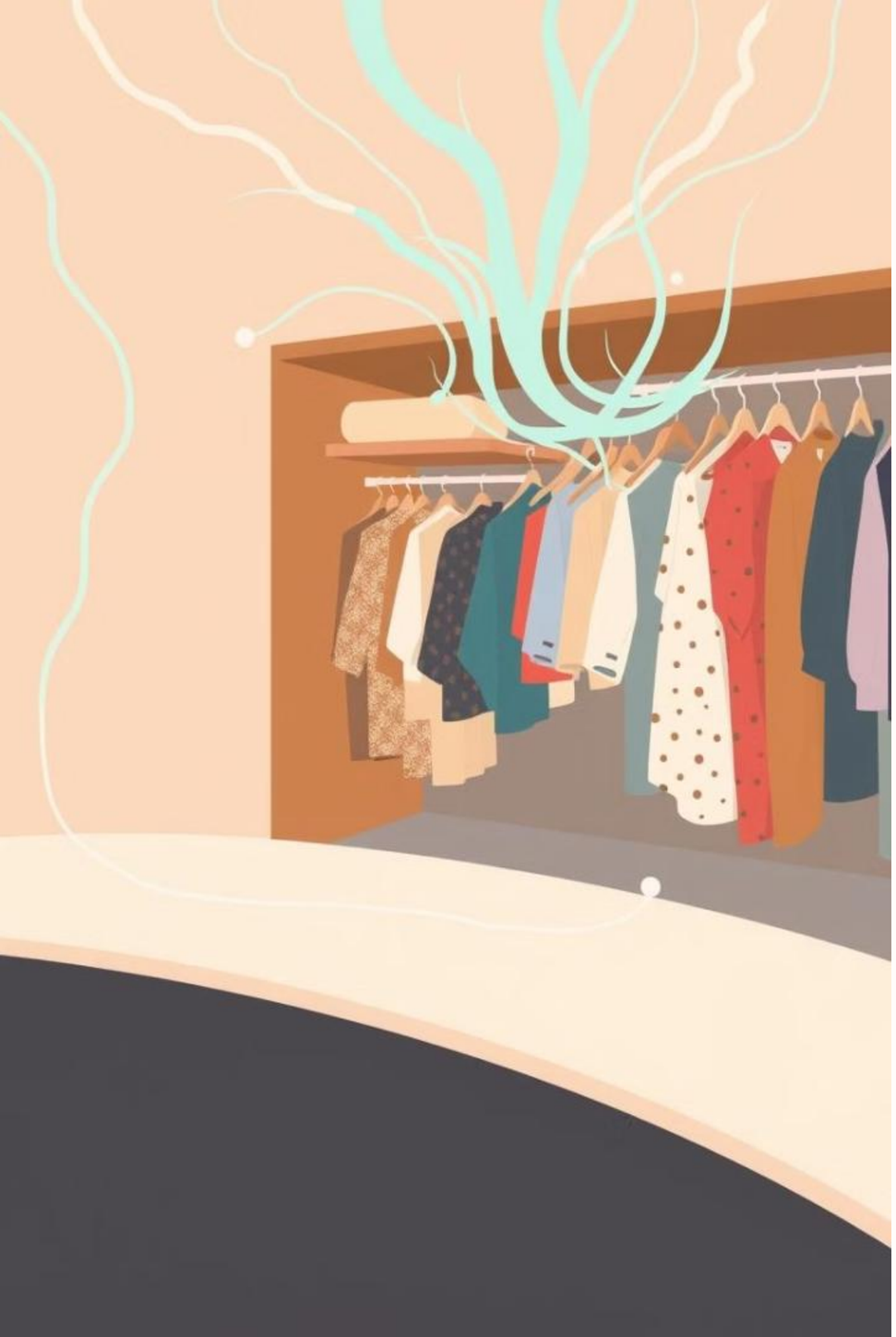
2 **Application Logic Layer**

Contains APIs and recommendation engines for seamless functionality.

3 **Data Layer**

Utilizes PostgreSQL for storing and managing data securely.

Hosted on AWS or Google Cloud for scalability, availability, and enhanced security features.



Key Takeaways

Data-Driven

Scalable system.

Effective SQL

Normalized databases.

Sustainability

Promote community.