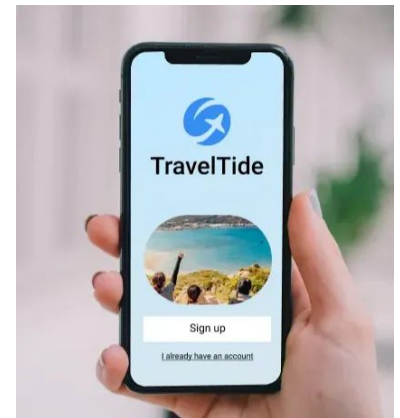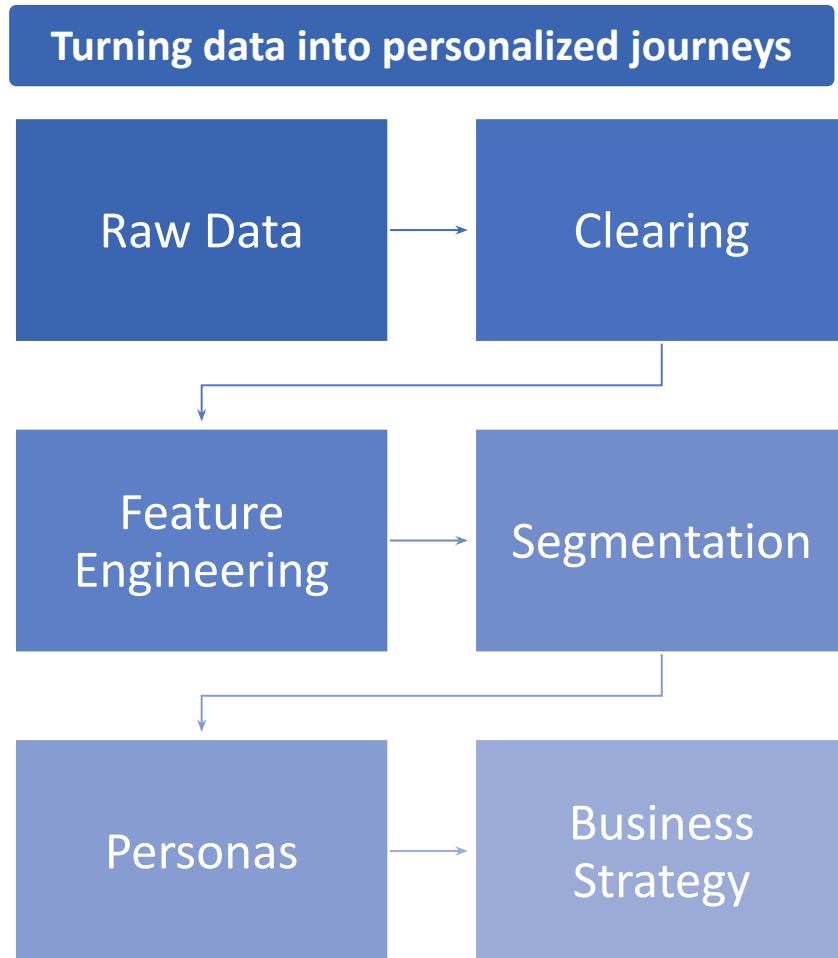# TravelTide: Customer Segmentation for Smarter Rewards

Purpose:
Understand traveller behaviour to design targeted perks that grow loyalty and repeat bookings.

👤 Md Erfan 🎓 Masterschool 2025

Project Overview

Turning data into personalized journeys

Raw Data	→	Clearing

Feature Engineering	→	Segmentation

Personas	→	Business Strategy

Data Preparation & Feature Engineering

Understanding the Data Behind Our Travelers

- 4 sources: Users · Flights · Hotels · Sessions

- ≈ 6 000 active users · 200 000 sessions

- Key features: **conversion rate, loyalty index, promo use, trip length RFM, CLTV models**

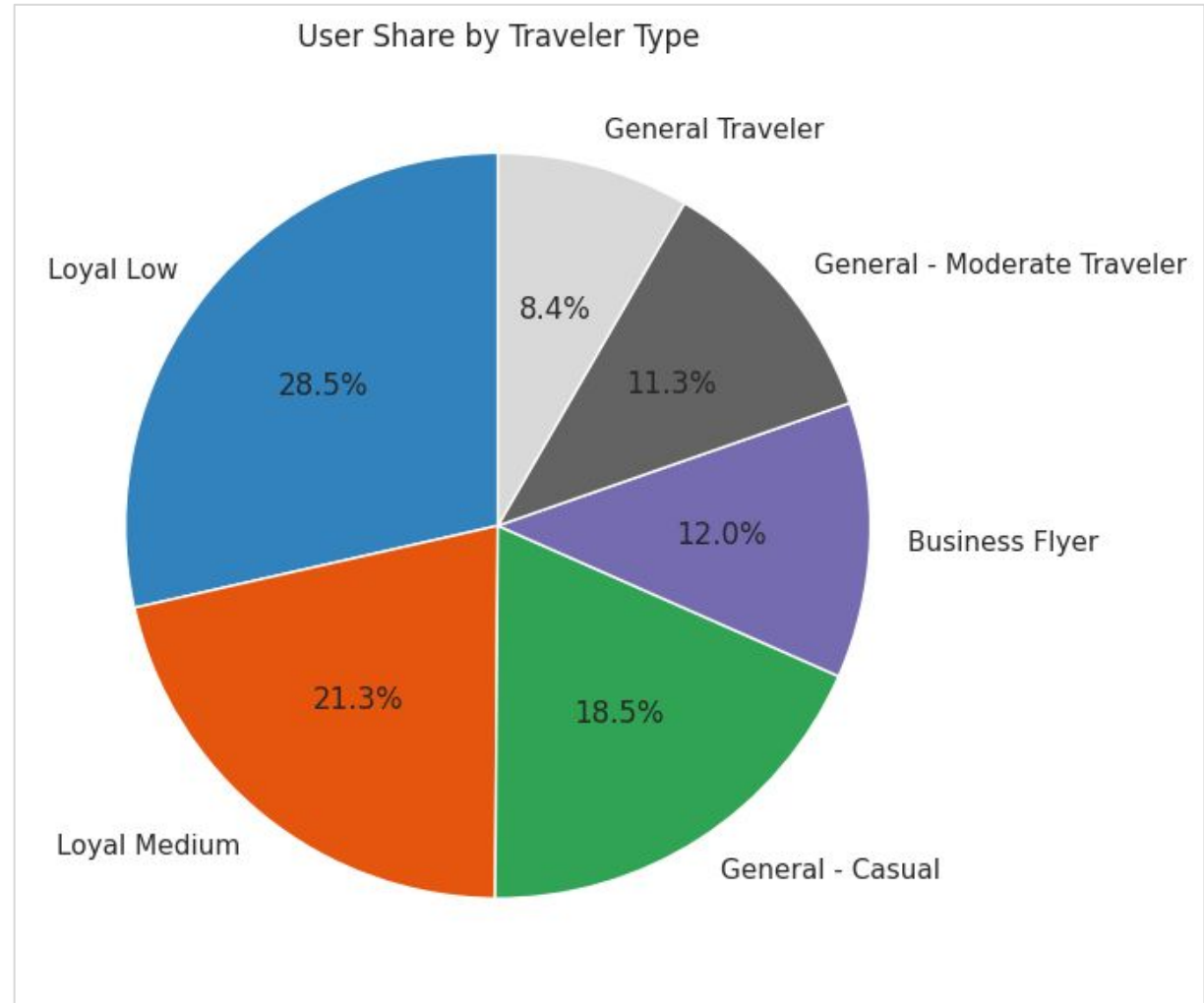➡ Gives a 360° view of traveller behaviour

Rule-Based Segmentation

Segmentation Logic:

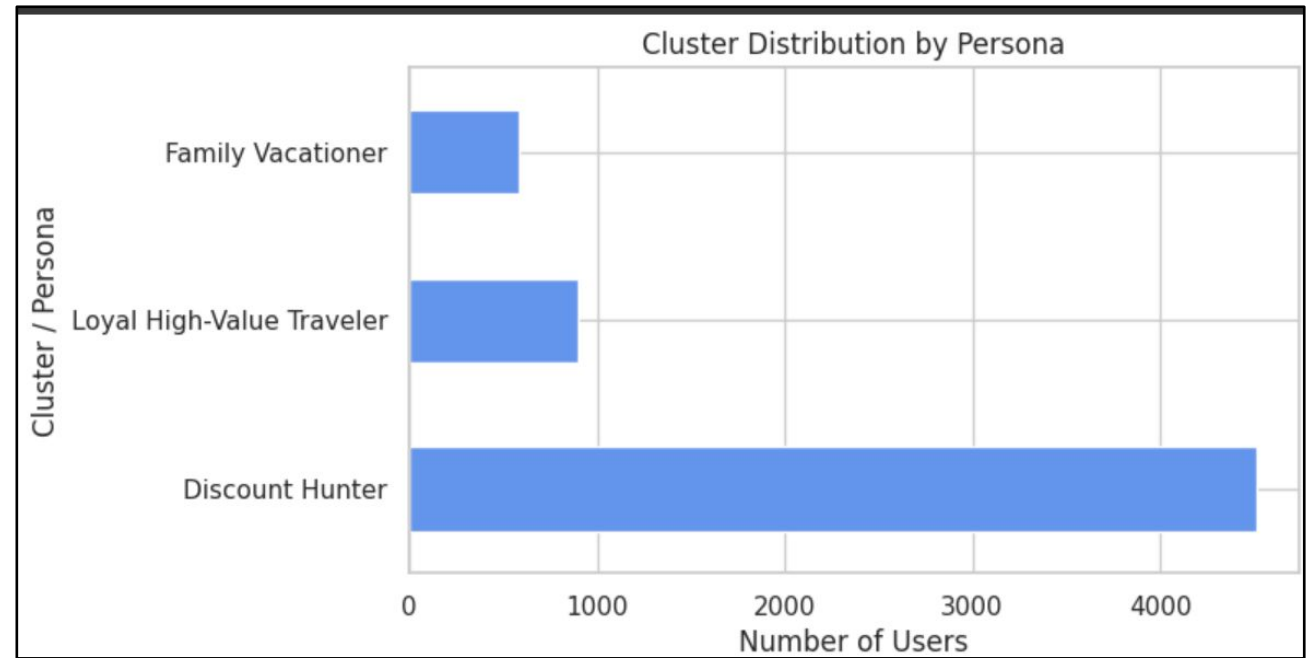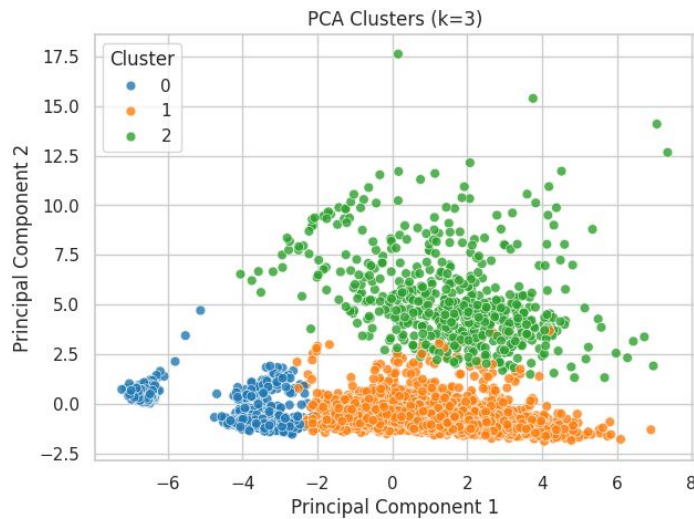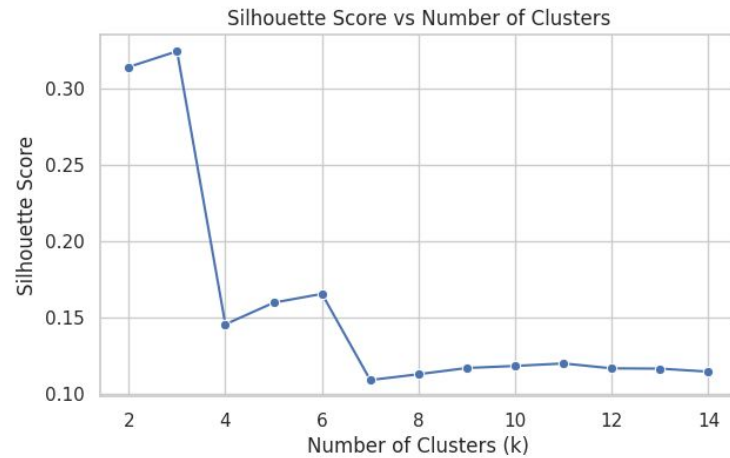**Used RFM + CLTV + behavior cut-offs**

Example rules:

- Conversion > 0.6 → Loyal

- Promo > 0.25 → Discount Hunter

- Trip ≤ 3 days → Business Flyer

Each user assigned a persona

User Share by Traveler Type


- General Traveler: 8.4%
- General - Moderate Traveler: 11.3%
- Business Flyer: 12.0%
- General - Casual: 18.5%
- Loyal Medium: 21.3%
- Loyal Low: 28.5%

Machine Learning Segmentation

Key Insights & Business Impact

Average CLTV by Persona
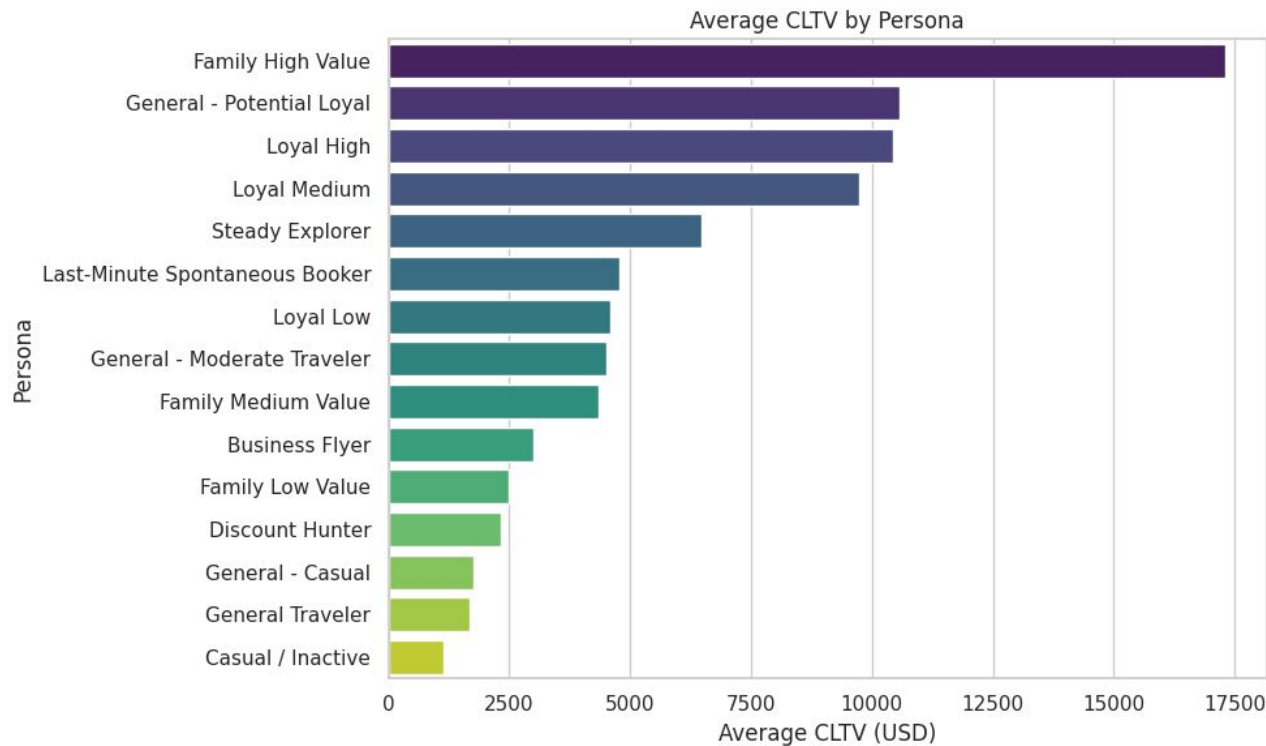
	Persona	Suggested Strategy / Perk
0	Loyal High	🏨 ✈️ Exclusive Free Night + Flight Deal
1	Loyal Medium	🏨 ✈️ 1 Night Free Hotel with Flight Booking
2	Loyal Low	✈️ Free Flight Upgrade
3	Discount Hunter	💸 Special Discount Codes & Flash Deals
4	Business Flyer	💼 Free Checked Bag + Flexible Booking
5	Last-Minute Spontaneous Booker	⏱️ No Cancellation Fees
6	Family High Value	👨‍👩‍👧 Premium Family Package Discount
7	Family Medium Value	🍽️ Free Hotel Meal for Family Booking
8	Family Low Value	🏨 Family Room Discount Offer
9	Family General	🍽️ Free Meal Voucher
10	Steady Explorer	🎫 Travel Credit for Next Booking
11	Casual / Inactive	📧 Welcome Back Discount Email
12	General - Potential Loyal	📈 Early Loyalty Access Offer
13	General - Moderate Traveler	🛡️ Small Partner Discount
14	General - Casual	🗞️ Newsletter + 10% First Booking Coupon
15	General Traveler	💌 Generic Travel Promo Code

Geographic & Behavioral Insights
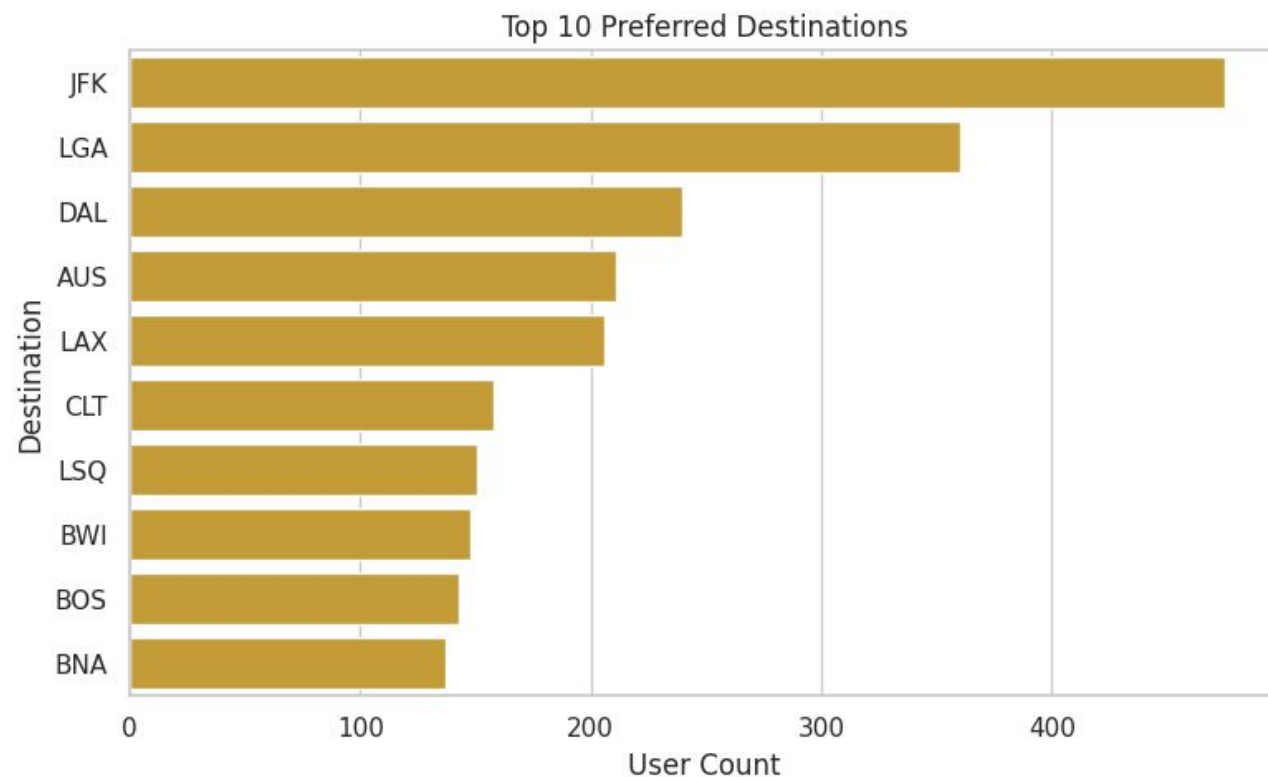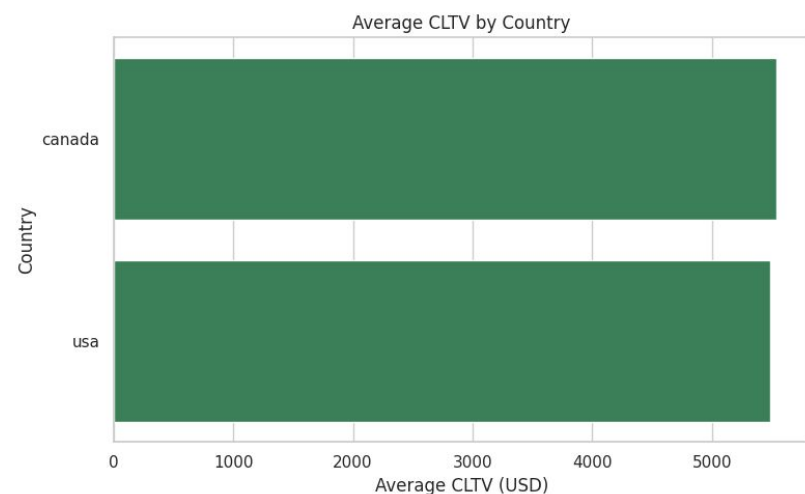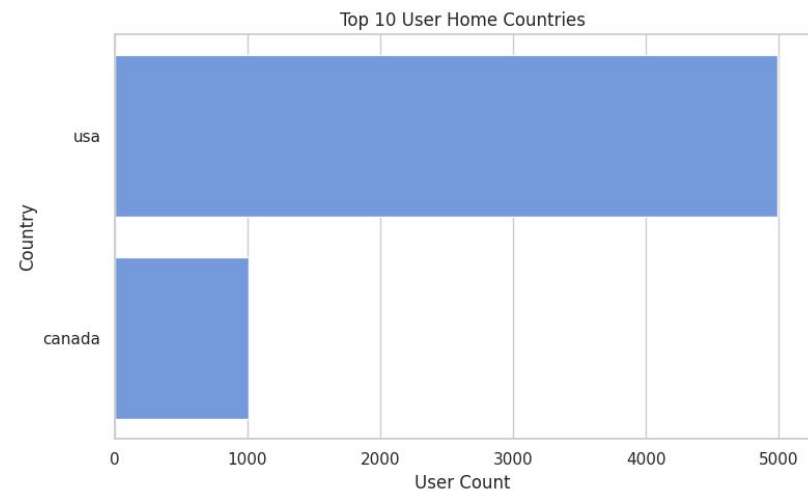
Future Steps & Takeaways

- Automate the RFM/CLTV pipeline

- Integrate real-time segmentation

- Build a dashboard to monitor key metrics continuously.

In short, this project shows how data analytics can transform TravelTide's customer relationships into measurable business growth.

Relationship matters !

- Not just about clusters or algorithms — it's about relationships with customer. we can treat them not as data points, but as travelers with dreams and choices.

Thank you