LoveLogic – Milestone 1

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Dataset

We are using a structured dataset on **dating app users**, containing **500 entries** with details on **age, gender, height, interests, relationship goals, education level, occupation, swiping history, and frequency of app usage**.

This dataset enables an in-depth analysis of **dating behavior, interests, and swiping activity**, revealing patterns in how different user demographics engage with the platform.

Problematic

Our visualization explores **behavioral patterns in dating app usage**, focusing on how different user attributes influence engagement and preferences. The **primary axes of analysis** include:

- **User Preferences**: How do different demographics (*age, gender, education level*) impact dating preferences and expectations?

- **Swiping Behavior**: Do users looking for a serious relationship (Marriage, Long-term Relationship) swipe more or less than those looking for casual dating or friendship?

- **User Selectivity**: What demographic factors influence user selectivity in online dating apps?

- **App Usage Frequency**: Do certain user profiles (e.g., younger vs. older users) exhibit **distinct engagement patterns**, such as daily vs. occasional usage?

Motivation

Dating apps have transformed modern relationships, yet **behavioral insights remain underexplored**. By visualizing dating trends, we aim to:

- **Reveal factors that shape user preferences** and engagement.

- **Identify common patterns in app interactions**, potentially improving matchmaking systems.

- **Provide insights into online dating behaviors**, offering value for social research.

Target Audience

Our findings benefit:

- **Dating app developers & UX designers**, helping optimize user experiences.

- **Social scientists & data analysts**, studying online dating trends.

- **Users curious about dating patterns**, who want to understand how preferences shape interactions.

Exploratory Data Analysis

### Preprocessing & Data Insights

Before diving into the fun part, we cleaned and preprocessed our dataset:

- **Converted categorical data into numerical values** (e.g., gender, education level).

- **Extracted individual interests** (e.g., cooking, hiking, music) into binary features.

- **Handled missing values** (only a few interest columns had them).

- **Encoded relationship goals & usage frequency** for analysis.

The Dating App Landscape: Key Findings

Who's on the App?

- Men are, on average, older than women on dating apps.

- The **average user age is 27**, with most users between **23–30 years old**.

- Gender is evenly distributed (**50% male, 50% female**).

Age Distribution by GENDER
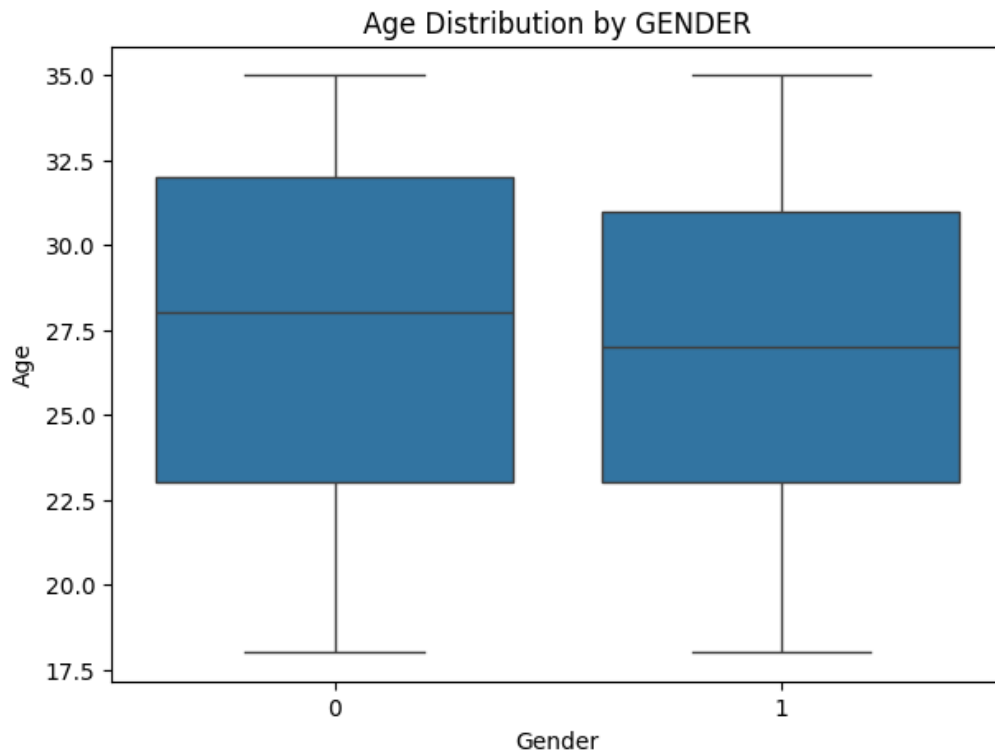
Interests & Hobbies: What's Popular?

- **Travel is the most common interest** (62.9% of users).

- **Music (58.5%) and sports (58.3%)** are also highly popular.

- **Cooking (58.1%), reading (57.7%), and hiking (57.1%)** have nearly equal engagement.

- **Movies (55.7%)** is the least common among the listed interests, but still popular.

- Users tend to list **multiple interests**, indicating a broad range of hobbies.

Swiping Behavior: Do People Swipe A Lot?

- The **average user has swiped 50 times**.

- Some users barely swipe, while others **go over 100+ swipes** per session!

- There are **distinct engagement levels**, suggesting different usage patterns (casual vs. active users).

Swiping frequency Distribution
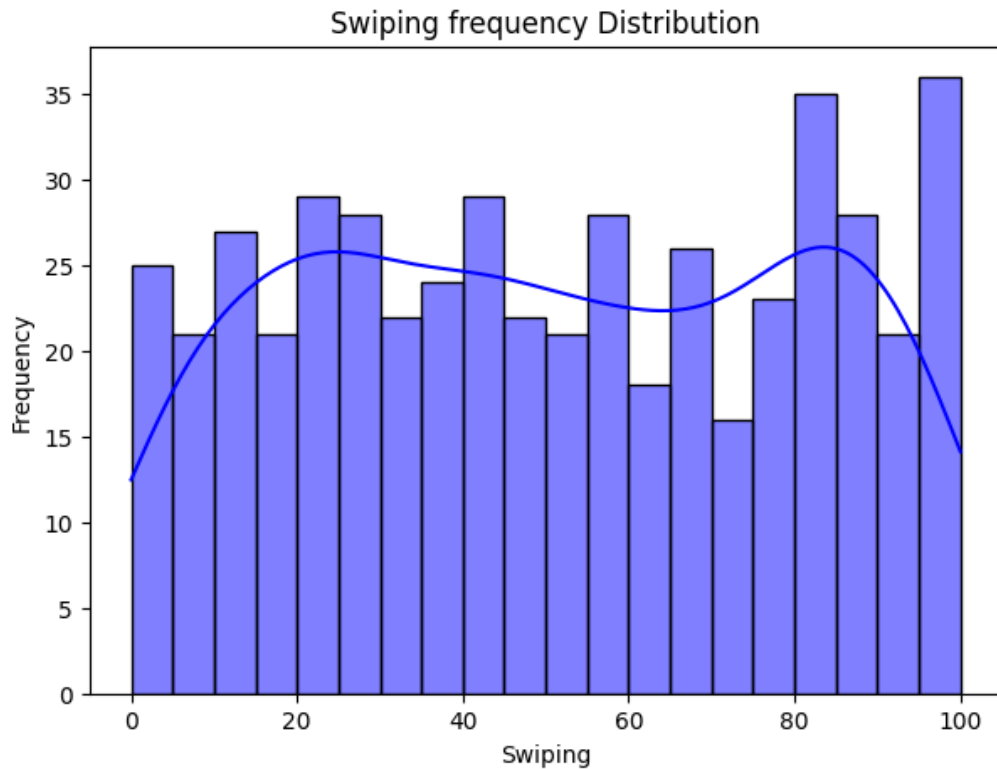
What's Next?

With these insights, we'll explore deeper **correlations** between interests, preferences, and swiping behavior. Are *travel lovers more likely to swipe right on fellow travelers*? Does *relationship intent influence swiping patterns*?

Stay tuned for **eye-catching visualizations** that reveal the secrets of online dating!

Related Work

Existing Research

A **study on Tinder user behavior** in New York City and London revealed distinct gender differences in swiping strategies.

- **Men** liked a large proportion of profiles but received matches only **0.6% of the time**.

- **Women** were more selective and achieved a **10% match rate**.

- **Women were also more engaged** in conversations, sending longer messages than men.

Source: Wikipedia - Tinder

Another **study examined swiping behaviors** on dating apps, focusing on mate value preferences and sexual satisfaction among young adults.

- Motivations such as **seeking committed relationships or casual sex** influenced swiping behaviors.

- Findings suggested that **need satisfaction with matches impacted long-term engagement** on dating platforms.

Source: ResearchGate - Swiping on Dating Apps

Our Approach

While previous studies primarily focused on **match rates and messaging behaviors**, our project explores:

- **Correlations between user demographics, interests, and app engagement patterns**

- How **age, education level, and shared interests** influence user interactions

- Swiping behaviors in relation to **relationship goals and common interests**

We focus on **interactive visualizations** to uncover **behavioral trends**, rather than predictive models.

Inspirations

We take inspiration from **FiveThirtyEight** and **FlowingData**, known for:

- **Data-driven storytelling**

- **Clear, engaging visualizations**

By combining **existing research with interactive visualizations**, our project provides a **unique perspective** on dating app user behavior.