# User Churn Project | Exploratory Data Analysis

Project Overview

The Waze data analytics team is focused on reducing the number of users who leave the platform each month, with the goal of supporting long-term growth. Through an in-depth exploratory data analysis (EDA), we've uncovered patterns in user behavior that are strong indicators of potential churn. These findings provide a foundation for more effective, targeted strategies to improve user retention. This report outlines our major insights from Milestone 3, along with recommended next steps.

Key Findings

- Users who used the app more frequently were much less likely to churn.
    - 40% of users with zero usage in the past month churned.
    - No users who used the app every day (30 days) churned.
- Greater distance driven per driving day was linked to a higher chance of churn.
    - Users who drove farther on each driving day were more likely to leave.
- Number of driving days had a negative correlation with churn.
    - The more days a user drove in the past month, the less likely they were to churn.
- User tenure in the dataset was evenly spread, from new users to those with nearly 10 years on the platform.
- Most variables showed either a strong right-skew or a uniform distribution.
    - Right-skewed: Most users clustered at lower values.
    - Uniform: Users were evenly distributed across all values.
- Some variables had highly unlikely or impossible outlier values.
    - Outliers were observed in driven_km_drives, activity_days, and driving_days.

Data Distribution
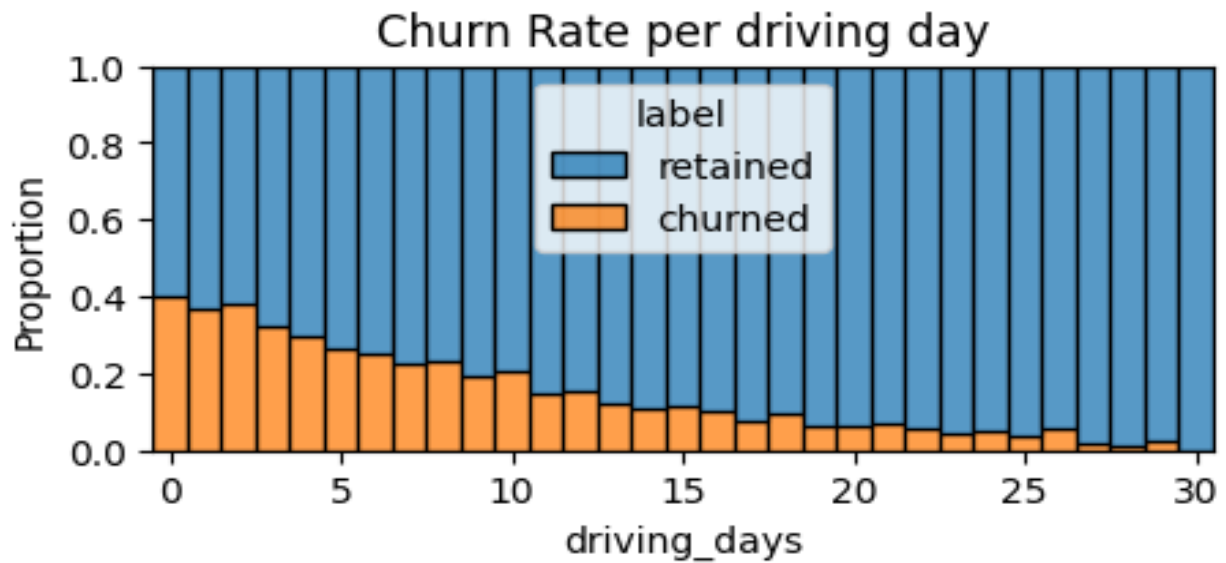
The churn rate is highest among users who used Waze infrequently or not at all in the past month.
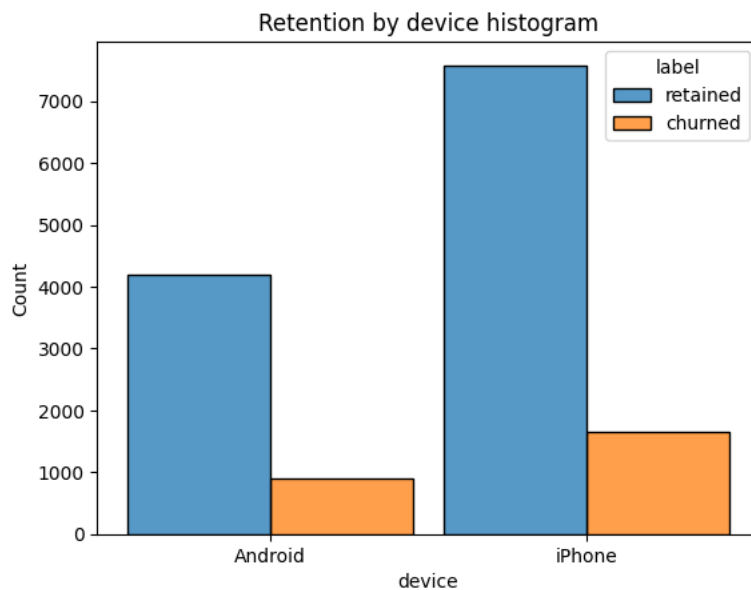
The ratio of churned to retained users is similar across different device types.

Recommendations & Next Steps

1. Investigate discrepancies and potential errors between the number of sessions, driving_days, and activity_days.

2. Continue collaborating with the broader Waze team to further explore user profiles; this may help uncover why long-distance drivers are more likely to churn.

3. Plan to conduct deeper statistical analyses on the dataset's variables to better understand their impact on user churn.