USER CHURN PROJECT | Two-Sample Hypothesis Test

Prepared for the Waze Leadership Team

Overview

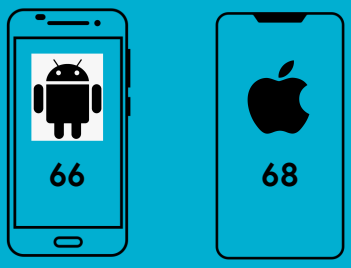
The Waze data team is developing a data analytics project focused on increasing growth by reducing monthly user churn.

As part of this effort, Milestone 4 explores user behavior through statistical testing. This report shares project status and findings that inform the next stages of churn modeling and retention strategy.

Objectives

- **Target Goal:** Conduct a two-sample hypothesis test to determine whether the mean number of rides differs significantly between Android and iPhone users.
- **Impact:** Statistical tests like this allow the Waze data team to move beyond description and make inferences about the broader user base–turning data into actionable insights that guide retention strategy.

Average Number of Drives



Note: The mean number of drives shown here – 66 for Android and 68 for iPhone – have been rounded up.

Results

- iPhone users showed a slightly higher average number of drives compared to Android users.
- The difference in average drives is not statistically significant. We therefore **fail to reject the null hypothesis**, concluding that iPhone and Android users drive with similar frequency.
- For business stakeholders, this indicates that **device type is not a meaningful predictor of user driving behavior** and likely does not need to be prioritized as a feature in churn modeling.

Next Steps

➔ **Run additional t-tests** on other key variables to uncover further patterns in user behavior.

➔ Since the user experience does not differ by device type, consider **testing temporary changes in marketing or user interface**. These experiments may generate richer data for understanding and reducing user churn.