

Dognition SQL Engagement Analysis Data Summary

by Michelle Aguiar

Overview

This SQL-based analysis supports Dognition's strategic goal of improving platform engagement by uncovering patterns in test completion behavior. The dataset contains timestamped test records linked to users and dogs, along with metadata such as user location and exclusion flags. This exploratory phase focused on identifying when and where engagement is strongest and establishing a clean baseline for future behavioral segmentation.

Project

This project centered on descriptive SQL queries to uncover temporal and geographic usage trends. Key tasks included:

- Evaluating engagement by weekday and time of year
- Cleaning the dataset by excluding flagged users and dogs
- Adjusting timestamps to align with user-local time (UTC-6)
- Ranking top U.S. states and countries by user activity
- Assessing whether engagement patterns were stable over time

All work was conducted in MySQL within a Jupyter Notebook environment.

Key Insights

- **Engagement peaks:** Sunday and Monday consistently showed the highest test completion rates, while Friday had the lowest engagement.
- **Clean dataset:** After removing flagged users and dogs, 34,121 valid dog profiles remained out of 950,331, forming the basis of the analysis.
- **Time zone correction:** Adjusting timestamps by six hours to approximate U.S. Central Time did not change the weekday engagement trend, confirming the robustness of the findings.
- **Year-over-year consistency:** From 2013 to 2015, engagement patterns by weekday remained stable, suggesting predictable user behavior.
- **Top markets:** California, New York, and Texas led in U.S. user activity. Internationally, the U.S., Canada, and the U.K. were the most engaged countries.

Next Steps

- Consider scheduling communications and product promotions on high-engagement days (Sunday and Monday)
- Investigate Friday's low engagement for potential friction points
- Explore deeper segmentation by user type or geography
- Expand the analysis to include test type or frequency
- Leverage engagement trends to inform targeted marketing strategies