

DSCI 510: Project Proposal

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Project Name: Analyzing User Sentiment Across Popular Dating Apps

What Problem Are We Trying to Solve:

With dating app usage at an all-time high, user dissatisfaction also remains notoriously high. The core problem is that simple star ratings fail to show why users are frustrated. This project aims to quantify the main pain points users face, looking specifically at whether safety risks and aggressive monetization practices are what users find the worst parts about online dating.

How Will We Collect the Data:

We will collect raw, publicly available user reviews from the Google Play Store, using the Google Play Scraper Python Library. In terms of sample size, we will collect 1000 user reviews for each of the 'Big 3' dating apps (Tinder, Hinge, Bumble), totaling 3000 data samples.

What Analysis Will We Do and What Visualizations Will We Create:

For analysis, I will employ VADER Sentiment analysis to quantify user emotion (positive, negative, neutral), use Feature Flag Engineering to create segment reviews related to the two key areas (safety and subscription complaints), and Latent Dirichlet Allocation Topic Modelling to discover the top 5 underlying thematic topics surrounding user reviews.

For visualizations, I will use various bar charts to compare apps, the review sentiments, topic distribution, and the percentage of feature flag reviews.