Bumble App Review Topic Analysis Using BERTopic

Introduction
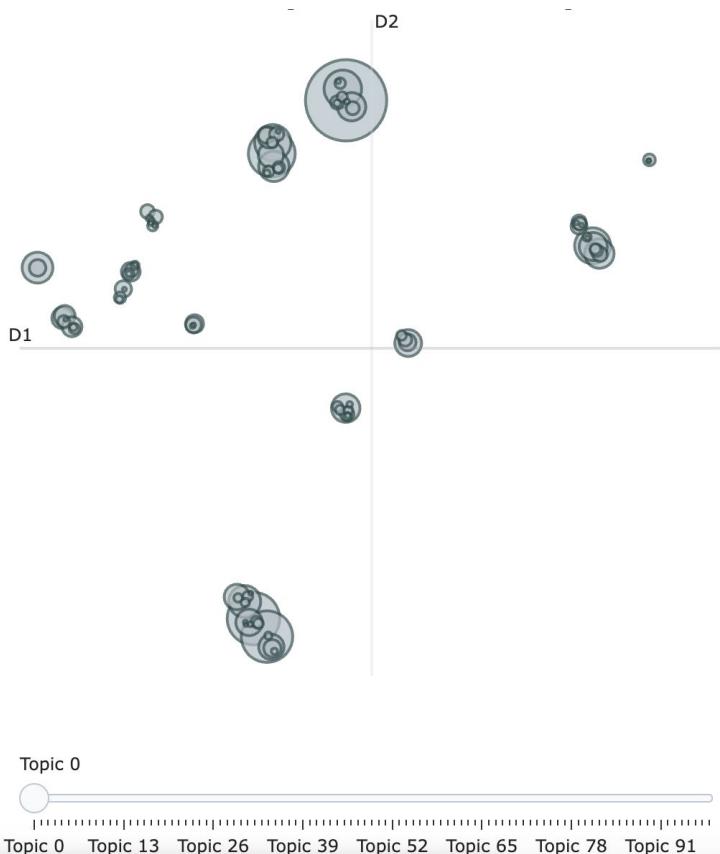
- The following analysis uses a Natural Language Processing (NLP) technique called topic modelling to understand which topics frequently occur for Bumble app reviews on the Google Play Store

- The data cover the period 2015-2022 and consist of circa 105,000 reviews

- The BERTopic model identified 100 potential topics which were narrowed down into 30 actionable topics in this analysis

- The analysis showed that although the highest ranked topic gave a positive view of Bumble, this was outweighed by many smaller topics which emphasised customer pain points

- Topics such as verification and sign-in issues, account blocking and issues with app loading were prevalent among many app users

- Bumble should take this opportunity to focus on these issues, address the concerns of users and ultimately improve the experience on its app

The Model

The Model

- A BERTopic Model was used to find interpretable topics in the Bumble app reviews data

- In total, 50 different models were trained, each with different, randomly selected hyper-parameters on a sample of data initially (10,000 rows)

- The best performing model was then used to identify topics in the full data set

- The models were evaluated by their coherence score. Coherence is a way to measure how well text in a certain topic coheres to a particular theme

- It is measured on a 0 to 1 scale with 0 being no coherence and 1 being perfect coherence. The general benchmarks are: poor (0.0-0.3), fair (0.3-0.5), good (0.5-0.7) and excellent (0.7+)

- The coherence score for our final model is 0.66

Topic Model Intertopic Distance Map
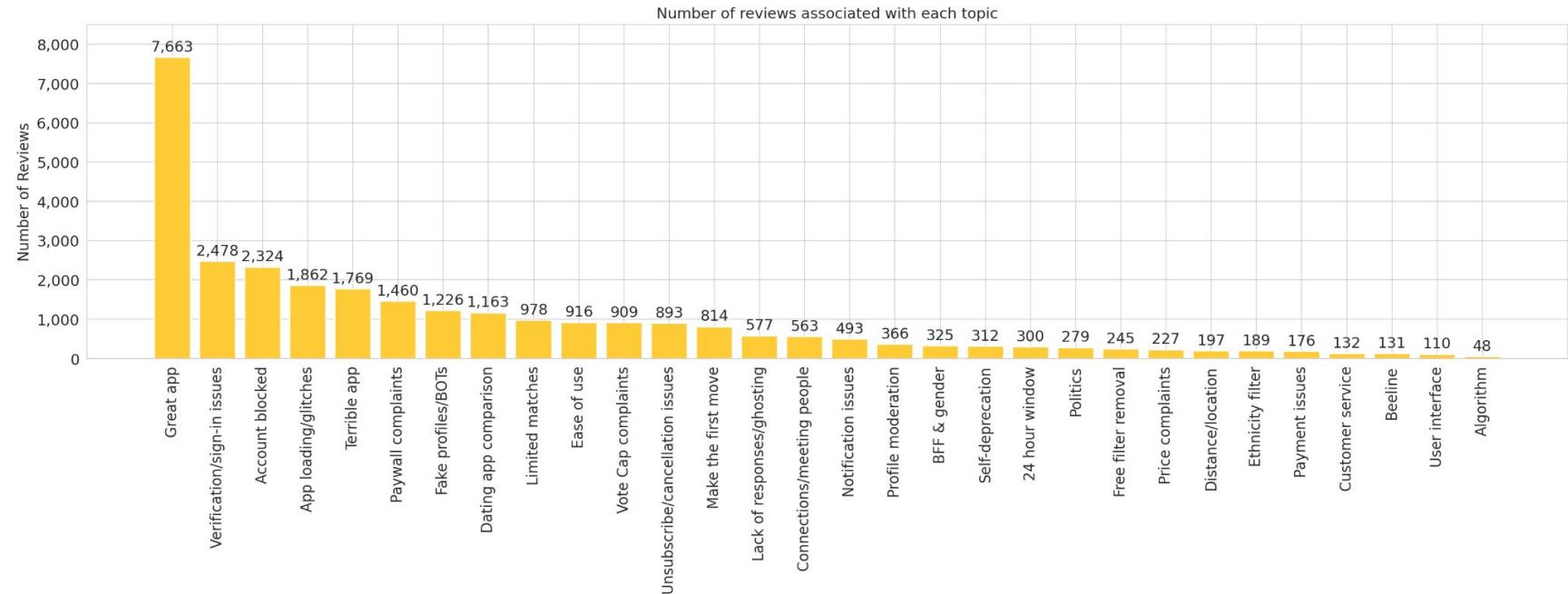
- The model identified 100 different topics. Each circle on this map represents a topic

- The distance between each circle represents similarity between topics. The overlapping circles therefore represent overlapping topics

- The size of the circles represents frequency: larger circles coincide with common issues and smaller circles relate to rarer issues

- Our map shows there are distinct, well separated themes. The occurrence of lots of overlap suggests many topics can be merged

- After reviewing the individual topics, it transpired that some could be merged while others consisted of irrelevant noise

- The final topic list has been reduced to 30 actionable topics

Results

Topic Analysis: Review Topic Volume

- The most common topic, with over 7,500 reviews, reflected positively on the Bumble app and labelled it as a great or good app
- However, this positivity was outweighed by the next six topics which covered verification issues, account blocking, app loading and general negative sentiment, themes which appeared in over 11,000 reviews

Number of reviews associated with each topic

Sample Reviews: Verification Issues, Account Blocked, App Loading

Verification / Sign In Issues

- Never lets me get through picture verification despite trying various backgrounds and lighting conditions. Gutted with the experience now. Submitted reports through the app but never heard back from anyone.

- Can you please fix the photo verification? Can't log back in

- Stuck at log in and continues to refresh every time I enter the log in info

- Can't sign in, they call and when you enter the last 6 digits nothing happens and if you request for a text message they don't send

Account Blocked

- I am already 18+ still I was logged out saying we'll see you when you're 18. Very disappointed.

- I am of age to use the app and haven't violated the terms of service and got blocked. I tried to click the email to tell them it's not true and it said error. I don't understand what happened

- Was banned because of gender orientation and being reported on by ignorant guys. Sent appeal explaining, but bumble refused to even actually read the appeal, and simply sent a repeated message that I'm sure they send to everyone who has been banned.

App Loading / Glitches

- Barely loads which makes it impossible to use

- App keeps freezing when I try and upgrade. Disappointing

- Sometimes it doesn't work and it closes itself...I don't know why

- It keeps crashing...even though I have an updated phone

- Crashes constantly after one use, only solvable with reinstall, then after 1 use, crashes again. S20+ so the phone ain't the problem

- Super glitchy - I have to redownload it every time I open it otherwise it doesn't load anything.

- Reviews under the 'Great app' and 'Terrible app' topics are not included here due to their generic nature

Sample Reviews: Paywall Complaints, Fake Profiles, App Comparison

Paywall Complaints

- If you don't plan to pay, don't bother. The free options are useless.

- There should be some free trial and service

- Good but need less pay walls

- Ok, but not sure how I will ever meet someone when you have to pay for every way to be able to talk with someone!

- Sucks. You have to pay to do anything. You cant even see who's liked you.

Fake Profiles / BOTs

- More bots then ever and you get a like and have to pay to see who it is, which is a bot 100% of the time.

- Too many fake accounts

- Tons of fake profiles... Too many times you're just talking to someone and their profile disappears. App has gone downhill in a big way 👎

- Worst dating app ever, so many fake profile. May as well go to Instagram. What a joke

- More paywalls and bots than people.

Dating App Comparison

- You must now pay for the features that used to be free. Go use Hinge.

- Great app. Better than tinder

- Terrible and basically same app as Tinder with same horrid paywall to use basic functions like messaging or liking others. I understand why people still use apps like Grindr etc.

- Nice job copying Hinge with the new layout.

- Could be nice if you compare it with other apps but the interface & first draft text that HINGE has is an outstanding move. I think bumble can start something similar.

- Reviews under the 'Great app' and 'Terrible app' topics are not included here due to their generic nature

Conclusion

- The BERTopic Model enabled us to identify 30 different topics that frequently occur among users reviewing the Bumble app

- Whilst there were a high number of positive reviews, these were outnumbered by negative reviews covering various customer pain points

- Issues relating to verification / sign-in, app loading and fake profiles were among the highest ranking topics identified by the model

- It is recommended that Bumble address the issues relating to verification and app loading in particular given that these occur at the top of the funnel and could result in the company losing a potential active user base

- Tougher action should also be taken against fake profiles and bot accounts given that these adversely affect the user experience and could encourage users to turn to competitors

Thank You