

Google Play Store Analysis



A BSAN 6080 Group Project



Agenda

1. Job Posting + Data

2. Dashboards

3. A/B Test Proposal

4. Conclusion

Job Posting



Business Analyst, Play Partnerships

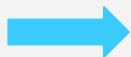
Google Los Angeles

Full-Time Associate

Q Business Analyst



Generate data insights that drive business strategy and operations for Google Play Partnerships team.



Develop and automate reports, iteratively build, and prototype dashboards to provide insights at scale.

Data



kaggle™

Google Play Store Apps

- 600K applications
- 2021
- Python script (Scrapy)

kaggle™

Google Play Store Reviews

- 12K reviews
- 2021
- Google-Play-Scraper



GPS Food Delivery Reviews

- 13K reviews
- 2022
- Google-Play-Scraper

Data (ETL)



- Design schema
- Confirm data types and PK/FK
- Load tables via CSV



- 3 Tables
 - applications
 - app_reviews
 - food_delivery_reviews




- JOIN on app_id
- Use custom SQL for Tableau visualizations


Dashboards




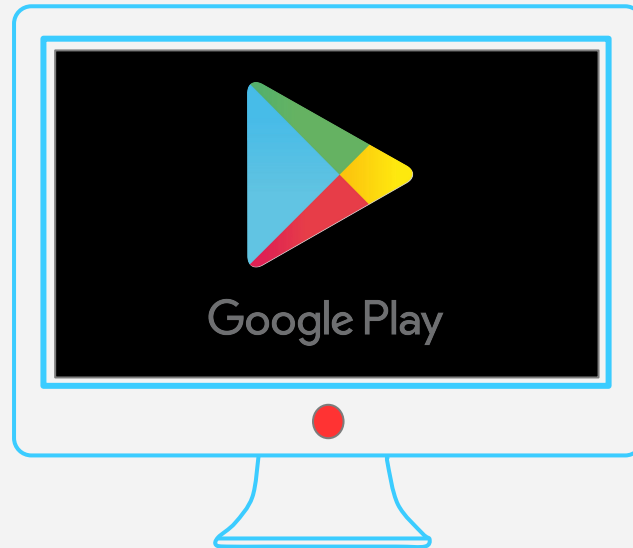
 Google Playstore Strategic Dashboard

 Food Delivery Strategic Dashboard

 Food Delivery Reviews Dashboard

 Applications Insights Dashboard

 DoorDash App Summary Dashboard





Google Playstore Performance

Last Updated: Q2 - 2022

Total Apps

418,281

Ad Supported Apps

254,712

Editor's Choice Apps

845

Total Developers

95,149

Average App Rating

4.124

Education
53,163 Apps

Books & Reference
34,800 Apps

Tools
29,212 Apps

Music & Audio
29,062 Apps

Entertainment
28,734 Apps

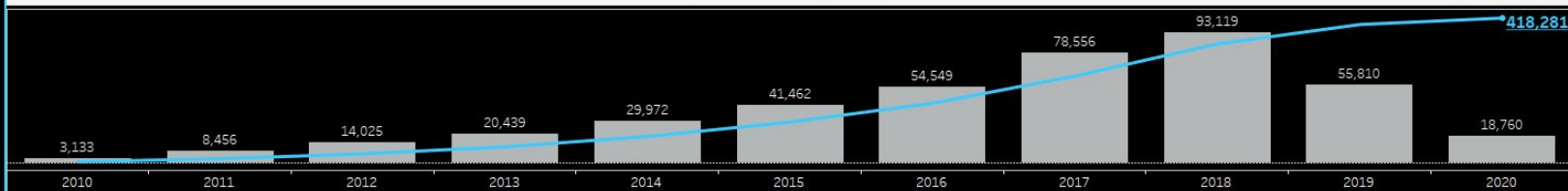
Lifestyle
23,948 Apps

Personalization
22,464 Apps

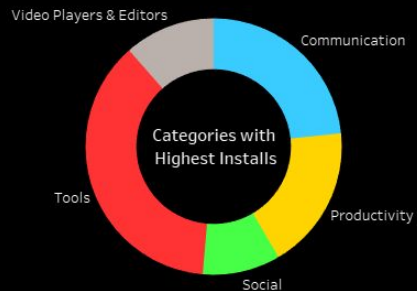
Business
15,531 Apps

Finance
15,051 Apps

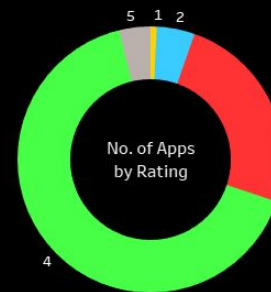
New Apps by Year



Apps & Installs



Google Play services	5,198
YouTube	5,118
Google	5,098
Maps - Navigate & Explore	5,098
Google Text-to-Speech	5,088
Google Chrome: Fast & Se..	5,078
Gmail	5,078
Google Play Music	5,048
Android Accessibility Suite	5,038
Facebook	5,038
Google Drive	5,038
WhatsApp Messenger	5,028
Google Play Movies & TV	5,018
Messenger - Text and Vid..	1,138
Hangouts	1,138
Google Photos	1,138





Google Playstore

Food Delivery Summary

Last Updated: Q2 - 2022

Total Apps

5,851

% of All Apps

1.429%

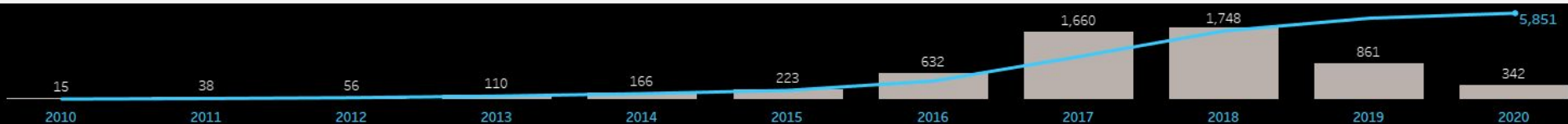
AVG Rating

4.227

% of All Installs

0.40%

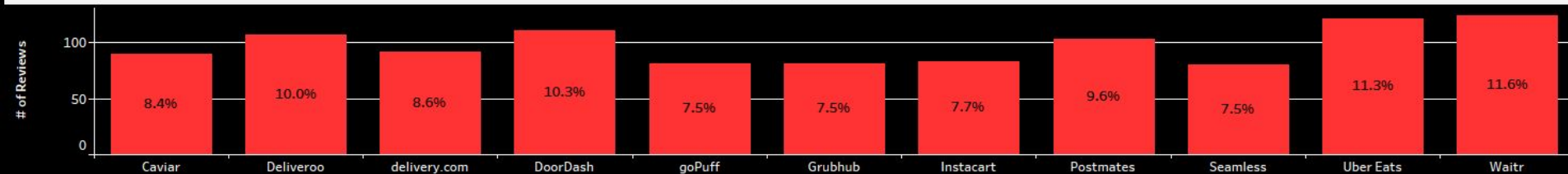
New Apps by Year



Trending Food Delivery Apps

	Caviar	Deliveroo	delivery.com	DoorDash	goPuff	Grubhub	Instacart	Postmates	Seamless	Uber Eats	Waitr
AVG Rating	4.0	4.3	4.0	4.5	4.5	4.2	4.4	3.7	4.3	4.1	4.5
Total Installs	0.51M	10.13M	0.11M	10.54M	1.05M	10.33M	5.07M	10.04M	1.02M	101.37M	1.01M
Total Reviews	1,200	1,200	834	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200

Percentage of At-Risk Reviews





Google Playstore

Food Delivery Review Analysis

Last Updated: Q2 - 2022

Total Reviews

13,476

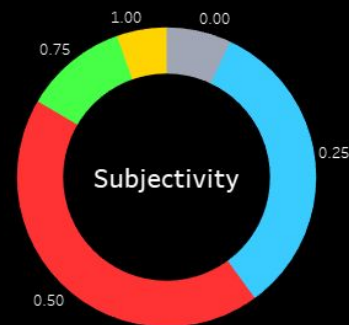
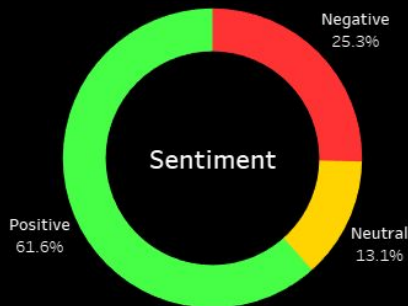
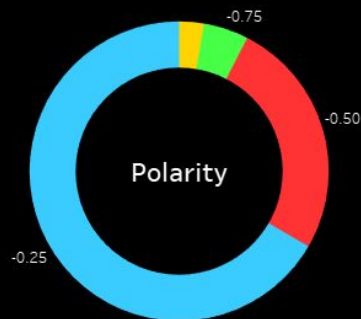
Open At-Risk Reviews

883

Closed At-Risk Reviews

272

Review Factors



Reviews

0★ I have used Waitr since it's inception. Their service has gone from great to horrible. Their customer service has gone from top notch to outsourced drivell. They have even employed underhanded tactics to make more profit. For instance, th..
1 of 6 missing items and 2 of 6 items were
1 star is TOO generous!!!! Want to charge your card \$10 "temp", even when my service charge is only \$1.92, which I had more than enough for but not quite \$10 on my card atm after bills, so I couldn't order groceries for my child. UPCHARGING..
1- Don't like NOT being able to shop Caviar via Rakuten. 2- Both the Caviar & the mobile app have pros and cons. Sure which they can get the pros to work for both sites. 3- Delivery has been hit & miss: ok sometimes, wacked other x's. 4- I wish r..
1. Needs a save for later 2. Needs to able to move items between carts 3. Needs to be able to pick replacements in the app
1/2 the orders get cancelled. The drivers constantly can't follow simple instructions. The tracking doesn't work 90% of the time. Can't tell what the driver is driving so you can't spot them which would be a nice touch. After an order is placed In..
1h30 of wait time . Lol.
1st it says free delivery but it is not free
1st off the app was very slow and it's not my Internet because I have a very fast Internet don't know why it was taking so long for screens to refresh and for the items that I had typed into the search bar to come up it took me so much longer to..
1st order placed canceled for unknown reasons (they said I could check an email then the email further requested effor so gave up) 2nd order unable to edit items in bag the option is therewhen pressed: item not found. needed to edit cuz when..
1st time in a Bit. we shall see how this experience is in comparison to before.
1st time order went smooth
1st time trying ordering was easy hopefully delivery goes smooth

Waitr
Grubhub
Instacart
Caviar
Instacart
Grubhub
goPuff
Seamless
Instacart
Grubhub
DoorDash
Caviar
DoorDash



Google Playstore

Food Delivery Review Analysis

Last Updated: Q2 - 2022

Total Reviews

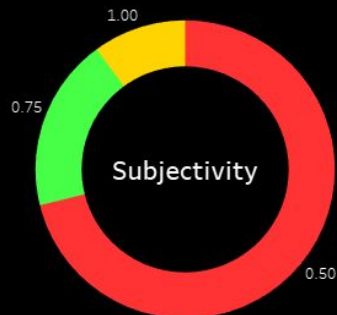
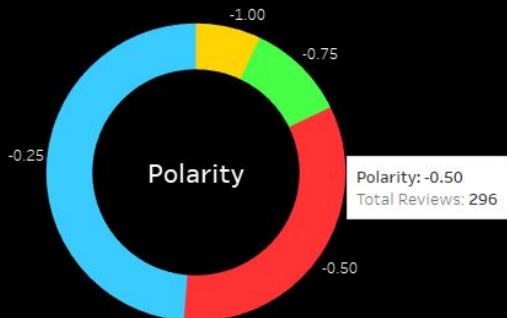
883

Open At-Risk Reviews

883

Closed At-Risk Reviews

Review Factors



Reviews

2 stars because it's an easy way to get food when you're unable or unwilling to go out.. ONLY 2 stars because it's rare that the order is not messed up in some way.. rarely get my full order, always takes an absurd amount of time to get deliver.. DoorDash

8 dollar "service fee" per order that gets placed with you is outrageous, especially on top of a "delivery fee" that is NOT the drivers tip. The only reason I use this app is because of a busy schedule, if it weren't for that I'd delete it and when a b.. Waitr

10.99 extra "busy area fee" because you're understaffed. Sorry but that's not only outrageous, but not on the customer.

80% of my orders are wrong or missing something. 25% of the time my orders are cold because they are late. I usually tip more than the default. When I go to leave a review for a vendor stating any of the above, my reviews are denied. "I did n.. DoorDash

- customer service is non-existent - fees are exorbitant - restaurant information is inaccurate and if ordering in the late night/early morning I'd call the restaurant to confirm you'll actually get some food sadly, my depressed and lazy insomniac.. Seamless

"convenient" if you like your orders messed up and food delivered cold. delivery.com

"Order help" button does not work. This means there is no way to contact an agent, cancel an order, or report an issue. I have tried restarting both the app and my phone. This is completely unacceptable.

"Payment error something went wrong." This appt doesn't even work.... Deliveroo

"tenonfood" does not even work " something went wrong" that's what I get Bs. Stick with door dash Caviar

\$7 service fee? Are you serious? Even if I got the unlimited it's still a \$5 service fee. This is abysmal. Postmates

A courier service at your fingertips, convenient! However don't be fooled because the quality is lacking from every aspect of this service. From massively incompetent delivery drivers that make wrong turns, can't find your location with easy i.. DoorDash

A short app review: the app is simple, but the buttons are in weird places if you're used to the UI of other food ordering apps like GrubHub. The service review: excellent! Yes, it's more curated, and that means a smaller list of places to order fro.. Caviar

A total waste of time, even after updates. It keeps saying something went wrong and the app won't load. Caviar



Google Playstore

Application Insights Summary

Last Updated: Q2 - 2022

Developer	In-App Purchases	Editor's Choice	Ad Supported	App Name	Category	App Rating	Content Rating	Free	# of Reviews	Year of Release	Installs
(주)미디어윌네트웍스		★	✓	알바전국. 알바 구인구직 포털서비스	Business	3.4	Everyone	True	0	2013	5.17M
(주)사람인HR		★		사람인 - 취업도 쉽고 빠르게	Business	4.6	Everyone	True	0	2014	1.15M
Asana, Inc.		★		Asana: Your work manager	Business	4.6	Everyone	True	0	2013	1.09M
BuzzFeed		★		Tasty	Food & Drink	4.7	Everyone	True	0	2018	5.17M
Cookpad Inc (UK)	\$	★		Cookpad - Create your own Recipes	Food & Drink	4.7	Teen	True	0	2010	10.48M
Cookpad Inc.	\$	★	✓	クックパッド-No.1料理レシピ検索アプリ	Food & Drink	4.2	Everyone	True	0	2011	10.38M
Culture Hero Co., Ltd.		★		아내의 식탁	Food & Drink	4.3	Everyone	True	0	2016	0.51M
Deliveroo		★		Deliveroo	Food & Drink	4.3	Everyone	True	1200	2016	10.13M
Delivery Hero Korea		★		배달요기요	Food & Drink	4.5	Everyone	True	0	2012	10.45M
dely, Inc.	\$	★	✓	クラシル - 料理をレシピ動画で簡単に	Food & Drink	4.4	Everyone	True	0	2018	5.05M
every, Inc.	\$	★	✓	DELISH KITCHEN - 無料レシピ動画で料理を楽しく・簡単..	Food & Drink	4.6	Everyone	True	0	2018	5.02M
EZHLD Corporation	\$	★	✓	Korean Food Recipes - 10k Recipes	Food & Drink	4.7	Everyone	True	0	2011	5.11M
Glassdoor Inc.		★		Glassdoor - Job search, company reviews & salari..	Business	4.6	Everyone	True	0	2013	10.08M
Good.Co Labs, Inc.		★		Good&Co Culture Fit Job Search	Business	4.3	Everyone	True	0	2014	1.02M
honestbee		★		honestbee: Grocery delivery & Food delivery	Food & Drink	2.9	Everyone	True	0	2015	1.05M
Indeed Jobs		★	✓	Indeed Job Search	Business	4.5	Everyone	True	0	Null	100.56M
infoedge.com		★		Naukri.com Job Search App: Search jobs on the go!	Business	4.5	Everyone	True	0	2012	10.50M
Kitchen Stories	\$	★	✓	Kitchen Stories - Recipes & Cooking	Food & Drink	4.7	Everyone	True	0	2015	1.06M
MangoPlate		★	✓	MangoPlate - Restaurant Search	Food & Drink	4	Teen	True	0	2012	1.06M
OrangeFish	\$	★	✓	食在方便 - 找美食餐廳	Food & Drink	4.5	Everyone	True	0	2012	1.11M
Poing Corporation		★		포잉 Poing	Food & Drink	4.3	Teen	True	0	2012	0.11M
Polydice, Inc.	\$	★	✓	愛料理 - 美食自己做	Food & Drink	4.8	Everyone	True	0	2013	1.06M
SEEK Limited		★		SEEK Job Search	Business	4.4	Everyone	True	0	2016	1.10M
SideChef	\$	★		SideChef: 18K Recipes, Meal Planner, Grocery List	Food & Drink	4	Everyone	True	0	2014	0.50M
Slack Technologies Inc.		★		Slack	Business	4.1	Everyone	True	0	2013	10.32M
Swiggy		★		Swiggy Food Order & Delivery	Food & Drink	4.1	Everyone	True	0	2015	51.17M
Tastemade	\$	★		Tastemade	Food & Drink	3.4	Everyone	True	0	2016	1.13M
Team Agrima		★		Recipe book: Recipes & Shopping List	Food & Drink	4.3	Everyone	True	0	2014	1.04M
Uber Technologies, Inc.		★		Uber Eats	Food & Drink	4.1	Everyone	True	1200	2016	101.37M
Vitalhint Korea		★		Foodiest: K-Food Recipes	Food & Drink	4.2	Teen	True	0	2015	1.01M
Wantedly, Inc.		★	✓	Wantedly: People search by cards	Business	4.2	Everyone	True	0	2016	1.00M

Filters

App Name

(All) ▼

Category

(Multiple values) ▼

Content Rating

(Multiple values) ▼

Developer

(All) ▼

Editors Choice

True ▼

Free

(Multiple values) ▼

Installs

(All) ▼

Rating

(Multiple values) ▼

DoorDash App Summary

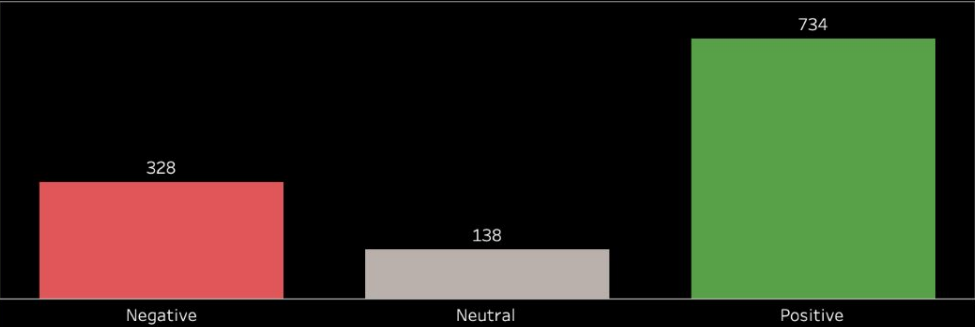


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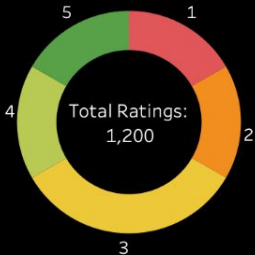
App Cheat Sheet

Category	Star Rating	Currency	Editor's Choice	Ad Supported	Free	In-App Purchases	Total Installs
Food & Drink	4.5	USD			True		10.54M

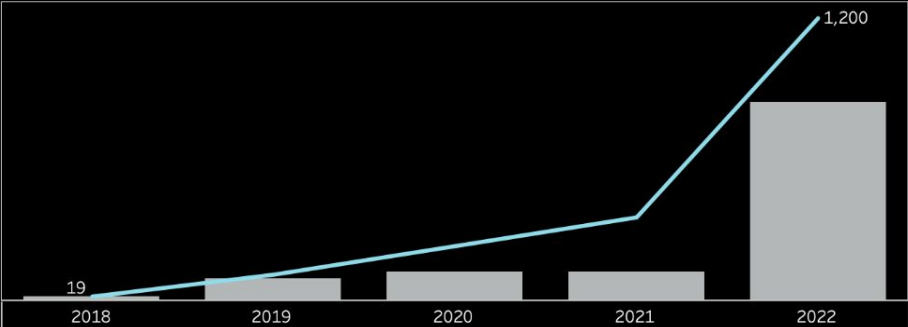
Review Sentiment



Review Ratings Breakdown



Reviews over Time



Reviews

12/1/21 (edit) - The new layout of the app takes up so much space on the phone. Can barely even se..	Positive
A courier service at your fingertips, convenient! However don't be fooled because the quality is lac..	Negative
a little lagging but all in all pretty good .	Positive
A lot of the drivers do not care. poorly trained.	Negative
Absolute garbage application. Constantly sends notifications for discounts that aren't reflected wi..	Negative
Always a pleasure ordering their food. The Honey Walnut Shrimp, Chicken and broccoli, and classic ..	Negative
Always awesome service	Positive
always fast and friendly service	Positive
always fast and reliable. helped me alot when I was pregnant:))	Positive
Always missing an item. Without fail. Either a drink, side dish, or just completely wrong order. I fin..	Negative
Amazing and very easy to use !!!!	Positive
App doesn't have full menu of many of the places. Some places you can't order the meals you have	Positive

DoorDash App Summary

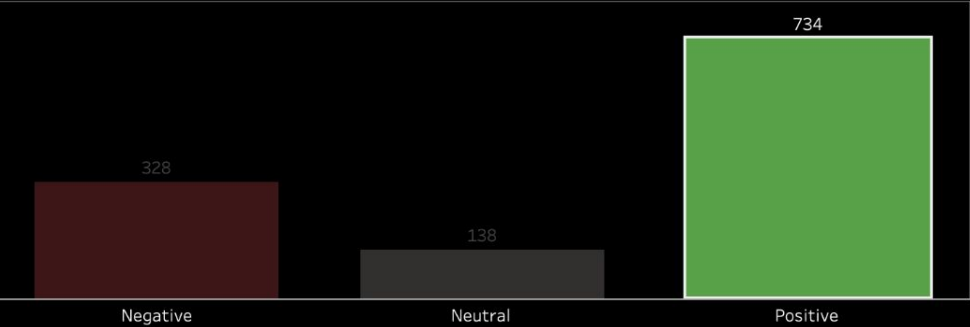


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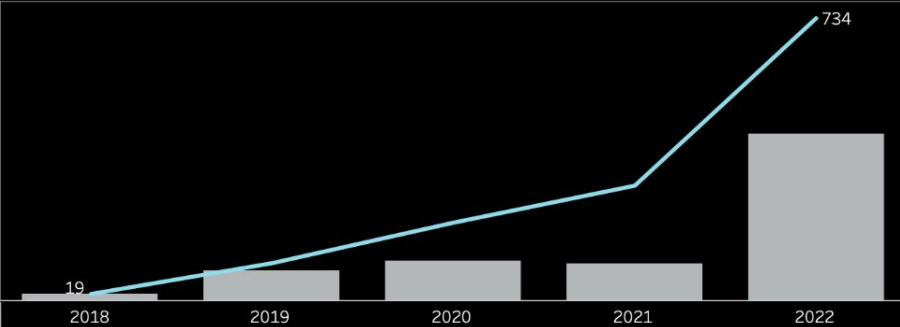
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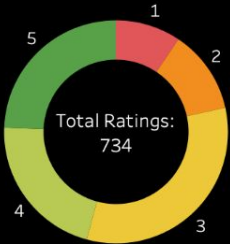
Review Sentiment



Reviews over Time



Review Ratings Breakdown



Reviews

a little lagging but all in all pretty good .	Positive
Always awesome service	Positive
always fast and friendly service	Positive
always fast and reliable. helped me alot when I was pregnant:))	Positive
Amazing and very easy to use !!!!	Positive
App doesn't have full menu of many of the places. Some places you can't order the meals, you have ..	Positive
App is a pain to navigate. Cant speak woth support bc app is broken. Activated chase unlimited das..	Positive
App is pretty user friendly overall. My main frustration is that there's no easy way to refuse dispos..	Positive
App is very easy to use and wonderful (especially when no delivery fees apply). The only thing I don..	Positive
Bit of advice. If you want people to double dash more, add the places that are double dashable on t..	Positive
Data is not in real time while dashing and takes time to fully load - sometimes days. Even the total ..	Positive
Disappointed. The shamrock shake is shown on the image for mcdonalds and yet you can find it now..	Positive



Leveling Up Reviews (A/B Test)



Increase number of reviews:

Test 'Leave a Review' button
size and position

Uninstall

Update

Similar app available
Facebook Lite (1.6 MB)
[View](#)

Rate this app

Tell others what you think



[Write a review](#)

Developer contact



Join the beta

A/B Test Design



Tracking



Google Play Console
Statistics

Success Metric



Increase Review Count

Variations



1. Current button
2. Larger, higher on page

A/B Test Execution



Analyze

- > 2 Weeks
- Large, diverse sample
- Even Cohorts



Deploy

- Move to Production if Significant
- Gradual roll out



Ideate/Repeat

- Continue to optimize
- Track KPIs to avoid slowdowns

Project Conclusion / Limitations



- ☒ Textblob is a strong source for predicting text sentiment
- ☒ We looked at 1 app category, but project can be scaled to other categories
- ☐ Not having datasets at the same granularity
- ☐ Needed to make assumptions about applicable skills and job description

Recommendations



Doordash should reply to negative reviews



Monitor percentage of At-Risk Reviews



Conduct further analysis as to why people are leaving a negative review



Utilize A/B Testing along with other techniques to find new ways to drive ratings and positive reviews



Discussion Questions



1. Are there other factors that you think should be considered when calculating a review as at-risk?
2. If you worked at DoorDash, what would you be interested in seeing that wasn't in our presentation?



Would **YOU** hire us?