



# Call of Duty Vanguard

Beta Reddit Analysis

# Problem Statement

- We need another direct line of feedback straight from our users to our developers.
- We also want to know how our beta is holding up against our main competitor Battlefield 2024



# Who Cares What Reddit Thinks?

- GME Stock went up ~1,745%
- Hedge-funds lost anywhere from \$13B - \$36B
- They are not alone ([source](#))
- Reddit hug of death
  - One Simple Wish ([source](#))



# Data Collection

	apple	bread	fridge	milk	rice
0	1	1	1	0	0
1	0	1	0	1	1
2	1	1	0	0	1
3	0	0	0	2	1
4	1	1	0	1	0

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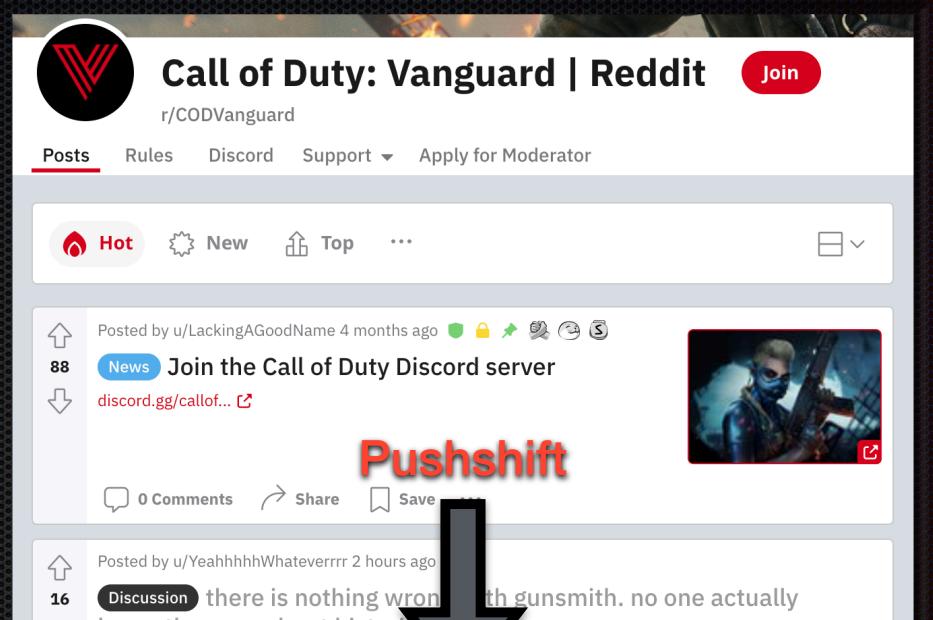
Posted by u/LackingAGoodName 4 months ago [Upvote](#) [Downvote](#) [Share](#) [Save](#) [Comment](#) [Report](#) [S](#)

Join the Call of Duty Discord server [discord.gg/callof...](https://discord.gg/callof...)

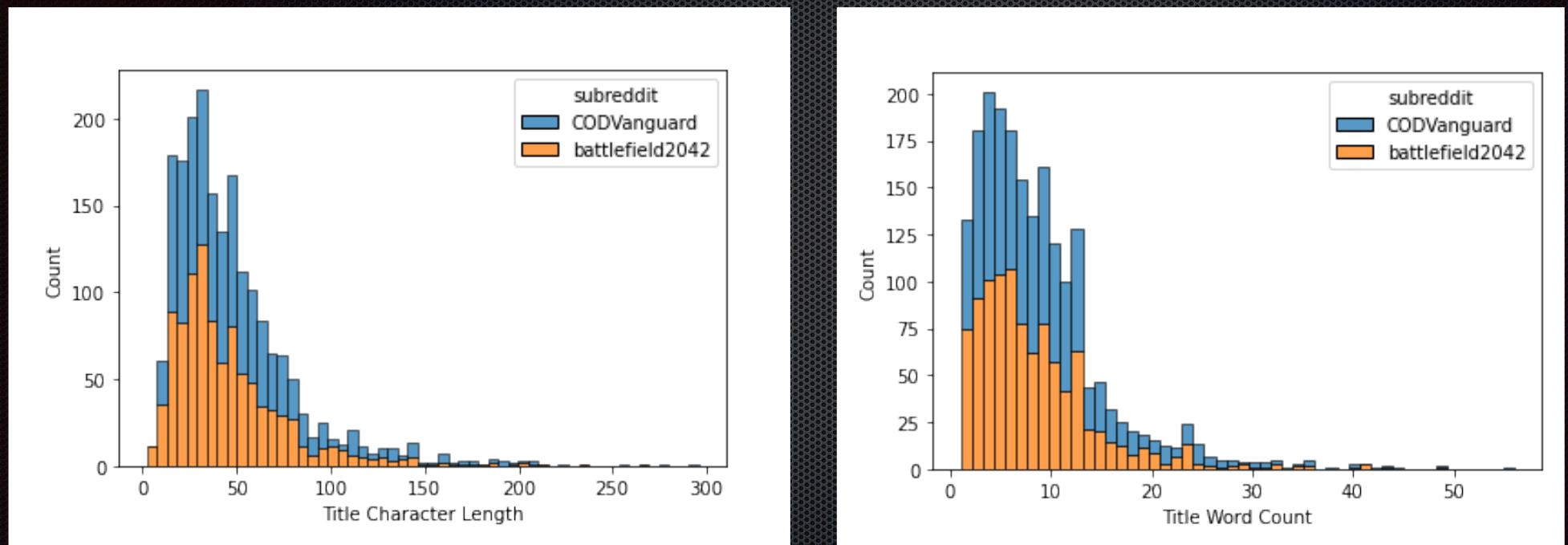
Posted by u/YeahhhhhhWhatevrrr 2 hours ago [Upvote](#) [Downvote](#) [Share](#) [Save](#) [Comment](#) [Report](#) [S](#)

there is nothing wrong with gunsmith. no one actually

**Pushshift**



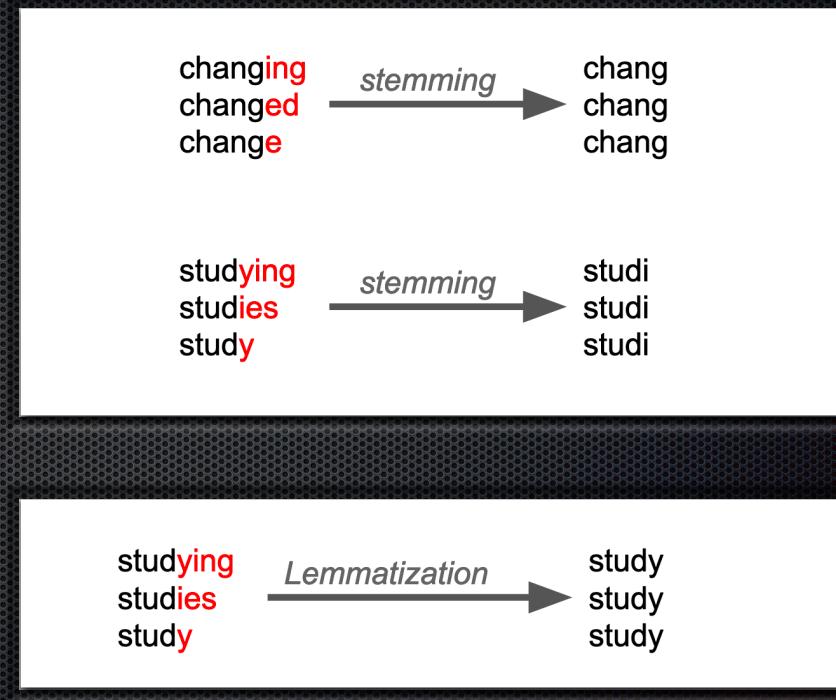
# Character Length & Word Count



# Data Cleaning & EDA

## Post Titles

1. Tokenizing
2. Stop Words
3. Stemming
4. Lemmatization



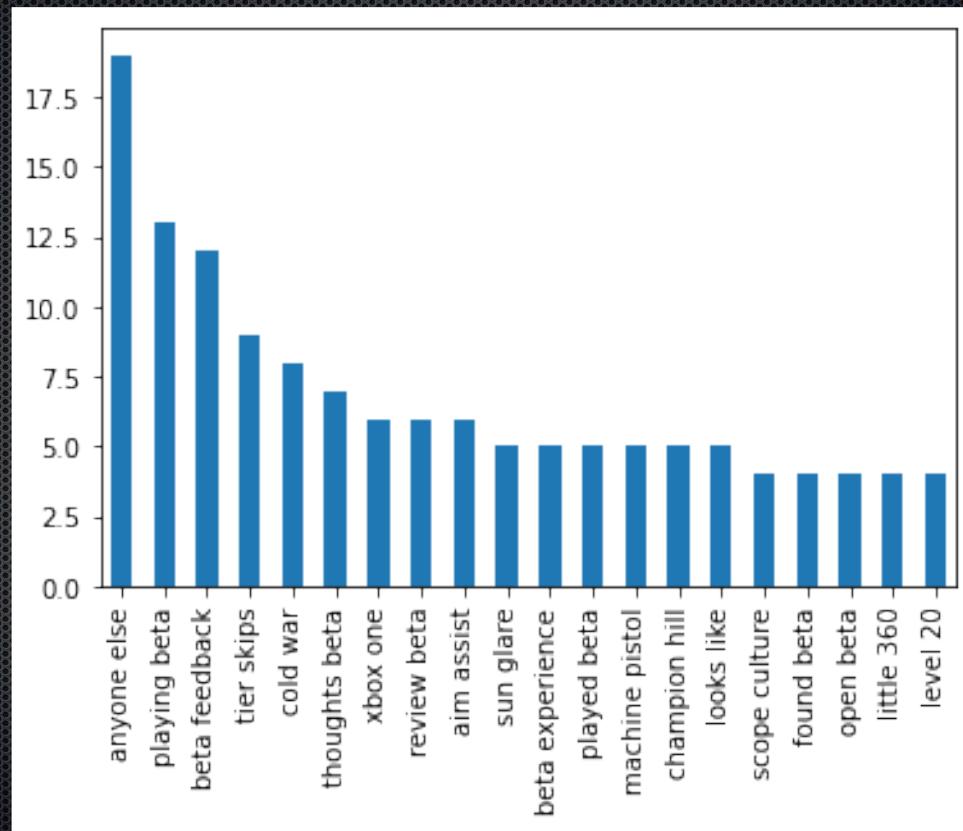
# Example: Stop Words and Lemmatization

- **Original:** “|One of many posts!”
- **Tokenize:**
  - [“one”, “of”, “many”, “posts”]
- **Remove stop words:**
  - [“one”, ~~“of”~~, “many”, “posts”]
- **Lemmatization:**
  - [“one”, “many”, “post~~s~~”]
- **Final:** “one many post”



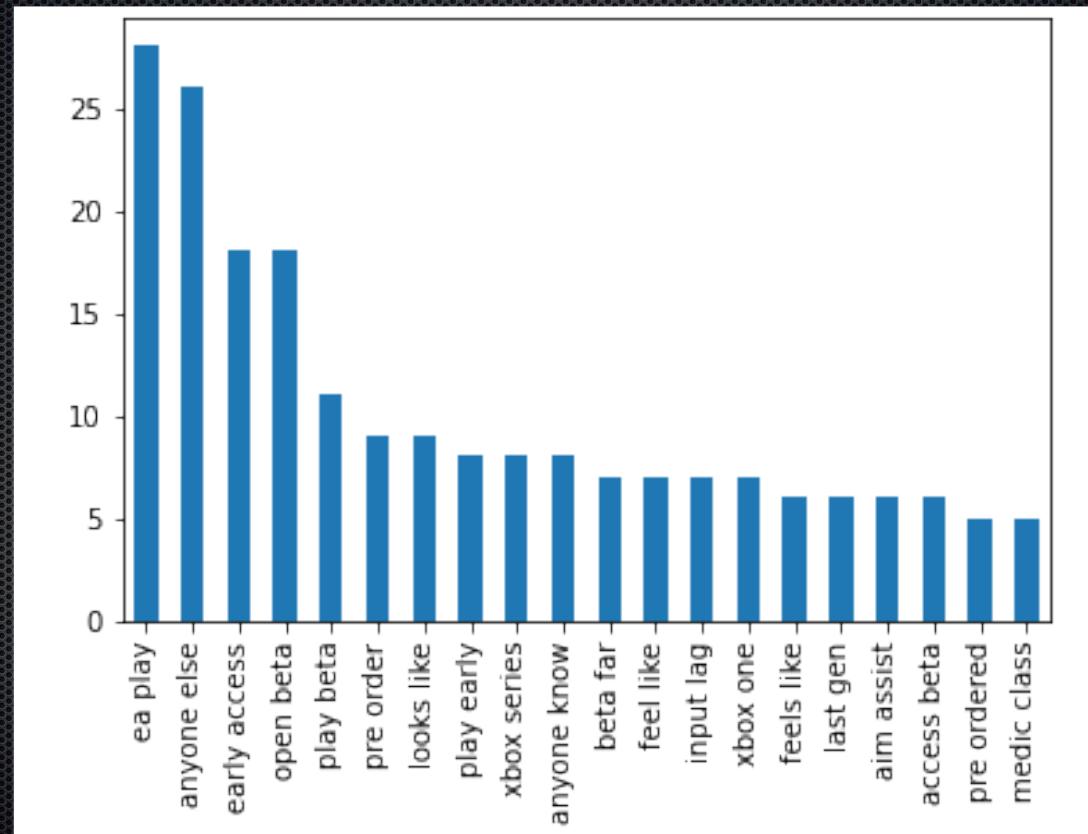
# Call of Duty: Vanguard BETA

- ▣ Tier Skips
- ▣ Cold War
- ▣ Aim Assist
- ▣ **Sun Glare\***
- ▣ Machine Pistol
- ▣ Champion Hill



# Battlefield: 2042 BETA

- Input Lag
- Aim Assist
- Medic Class



# Modeling & Evaluation

	Column Used	Best Estimator	Train Score	Test Score	True Positive	True Negative	False Positive	False Negative
0	lemma_title	Pipeline(steps=[('tvec', TfidfVectorizer(max_features=5000, ngram_range=(1, 2))), ('nb', MultinomialNB())])	0.96	0.72	225	250	80	105
1	lemma_title	Pipeline(steps=[('cvec', CountVectorizer(max_df=0.3, max_features=2000, ngram_range=(1, 2))), ('nb', MultinomialNB())])	0.89	0.70	210	249	81	120
2	lemma_title	Pipeline(steps=[('cvec', CountVectorizer(max_features=1500, min_df=4, ngram_range=(1, 3))), ('tfidf', TfidfTransformer()), ('rf', RandomForestClassifier())])	0.95	0.68	242	206	124	88
3	stem_title	Pipeline(steps=[('tvec', TfidfVectorizer(max_features=4000, ngram_range=(1, 2))), ('nb', MultinomialNB())])	0.95	0.72	228	244	86	102
4	stem_title	Pipeline(steps=[('cvec', CountVectorizer(max_df=0.3, max_features=2000)), ('nb', MultinomialNB())])	0.91	0.73	234	249	81	96
5	stem_title	Pipeline(steps=[('cvec', CountVectorizer(max_features=1500, min_df=4, ngram_range=(1, 3))), ('tfidf', TfidfTransformer()), ('rf', RandomForestClassifier())])	0.96	0.69	240	213	117	90
6	title	Pipeline(steps=[('tvec', TfidfVectorizer(max_features=4000, ngram_range=(1, 2), stop_words='english')), ('nb', MultinomialNB())])	0.96	0.77	247	262	68	83
7	title	Pipeline(steps=[('cvec', CountVectorizer(max_df=0.4, max_features=1500)), ('nb', MultinomialNB())])	0.91	0.76	251	253	77	79
8	title	Pipeline(steps=[('cvec', CountVectorizer(max_features=2000, min_df=4, ngram_range=(1, 3))), ('tfidf', TfidfTransformer()), ('rf', RandomForestClassifier())])	0.99	0.72	234	238	92	96

# Conclusions & Recommendations

- Our beta is doing well, but let's have a dialogue about the issues that keep coming up.
  - Topics of discussion: Tier Skips, Cold War, Aim Assist, Sun Glare, Machine Pistol, adding Classes.
- We beat the baseline, but our model needs work.
  - More data!
- Let's continue to monitor these subreddits as they move out of beta into full production.



# Image Sources

- Vanguard cover photo: <https://www.pcgamesn.com/call-of-duty-warzone/vanguard-release-date>
- Reddit logo: <https://variety.com/2021/digital/news/reddit-funding-round-10-billion-valuation-1235040079/>
- Wallstreetbets: <https://www.forbes.com/sites/johnegan/2021/02/12/wall-street-bets-how-the-saga-will-shape-the-next-decade-of-both-digital-community-and-activism-part-3self-aware-wolves/?sh=74fa9ea32b94>
- Reddit: <https://www.reddit.com/r/CODVanguard/>
- CountVectorizer: <https://stackoverflow.com/questions/59385146/count-items-across-all-columns-using-pandas-method>
- Stemming and Lemmatization: <https://openclassrooms.com/en/courses/6532301-introduction-to-natural-language-processing/6980741-create-a-unique-word-form-with-spacy>
- Boil Water: <https://www.wired.com/story/yes-you-can-boil-water-at-room-temperature-heres-how/>
- Vanguard realize date: <https://www.callofduty.com/blog/2021/08/Announcing-Call-of-Duty-Vanguard>