

VR SUBREDDITS

Jen Zieger

ENTER





PROBLEM STATEMENT

What is the best model to use for accurately predicting whether a post came from r/PSVR or r/Oculus subreddit?



WHAT IS VIRTUAL REALITY?

An artificial environment which is experienced through sensory stimuli (such as sights and sounds) provided by a computer and in which one's actions partially determine what happens in the environment

SUBREDDITS



r/psvr

Members: 170K

r/ Created Mar 19, 2014

Company: Sony



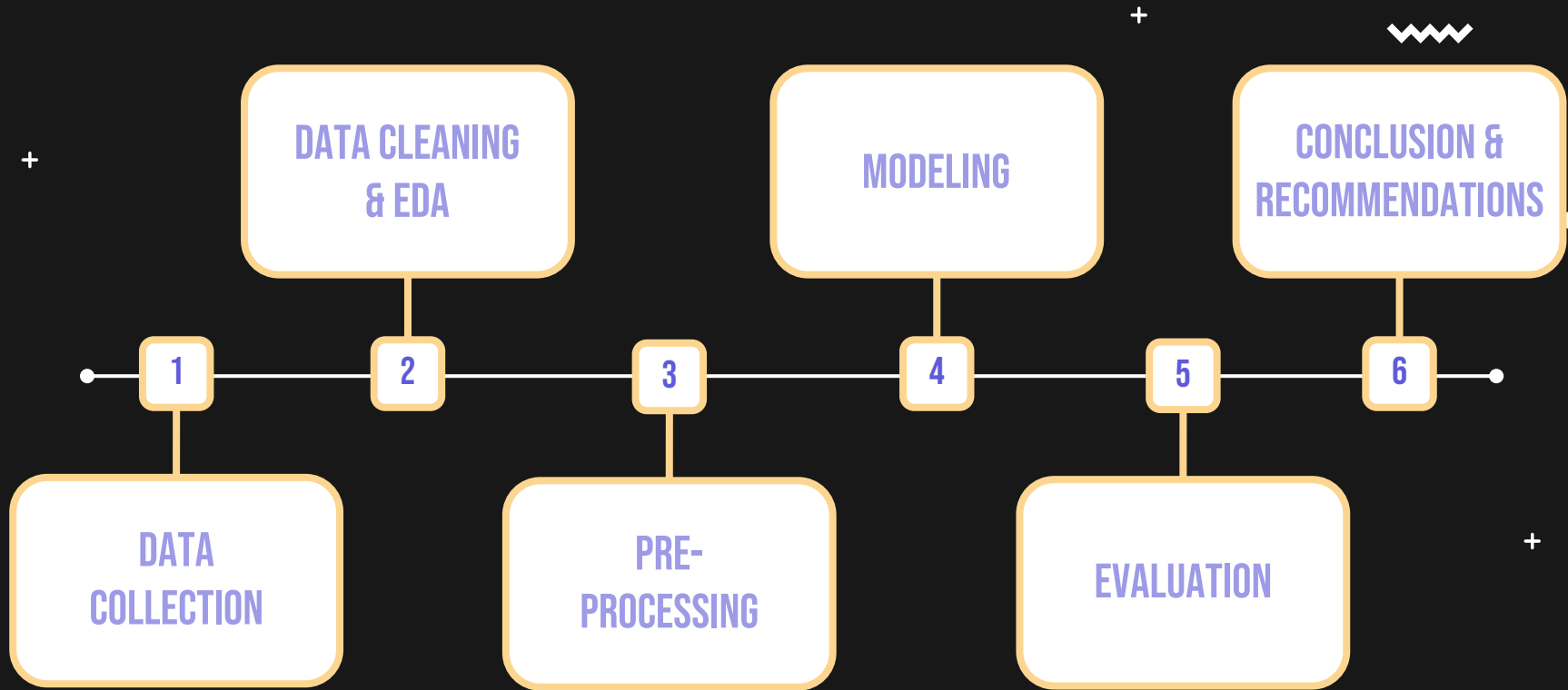
r/oculus

Members: 384k

r/ Created Aug 1, 2012

Company: Facebook

STRATEGY



DATA COLLECTION & CLEANING

WEB SCRAPING

Pushshift API
> 1500 Posts per r/

DATASET

3020, 4
1510 docs from
each r/



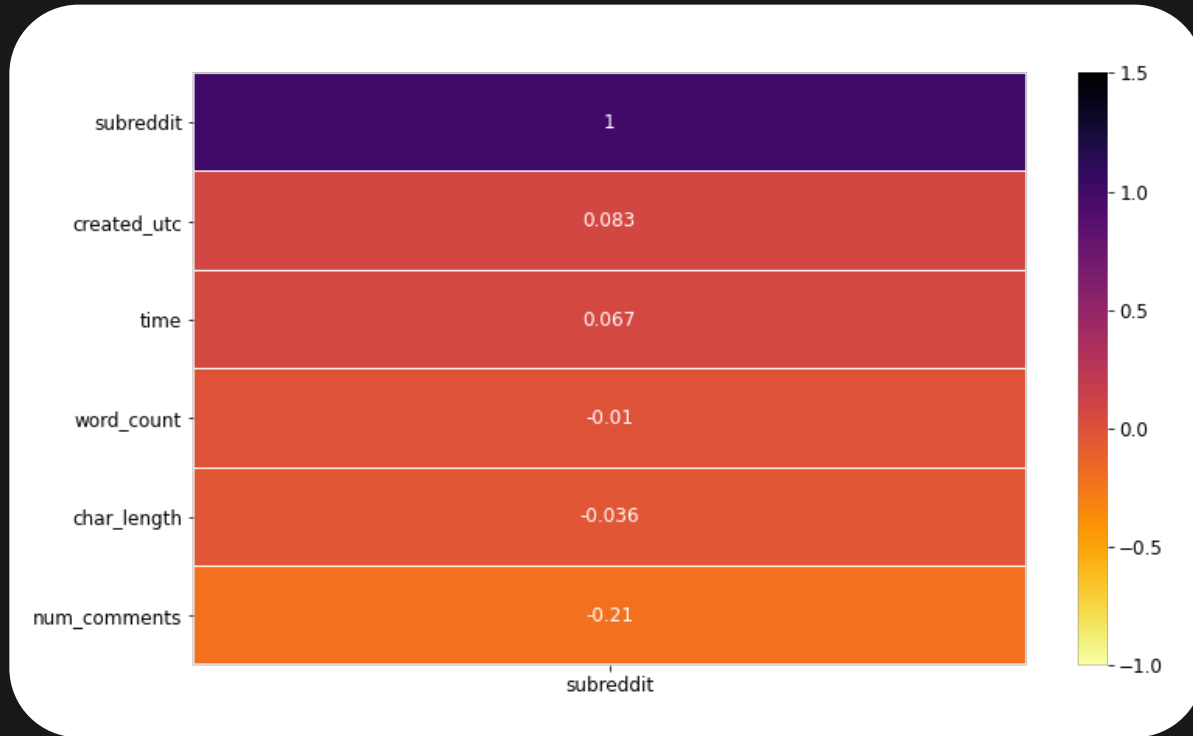
POST DATE RANGE

May 20, 2021 -
Oct 4, 2021

HIGH TRAFFIC POST HOURS

7-8 & 15-16
UTC

CORRELATIONS



TOP WORDS/STRINGS



+

+

OCULUS

- Oculus
- Quest
- Just
- VR
- Headset

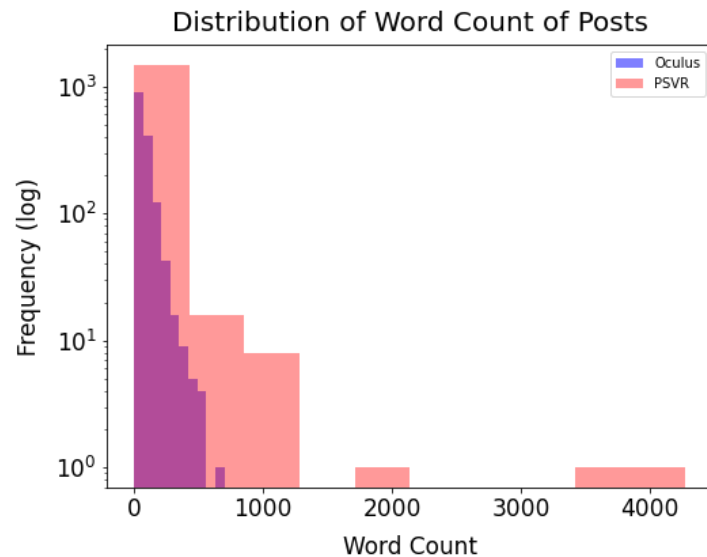
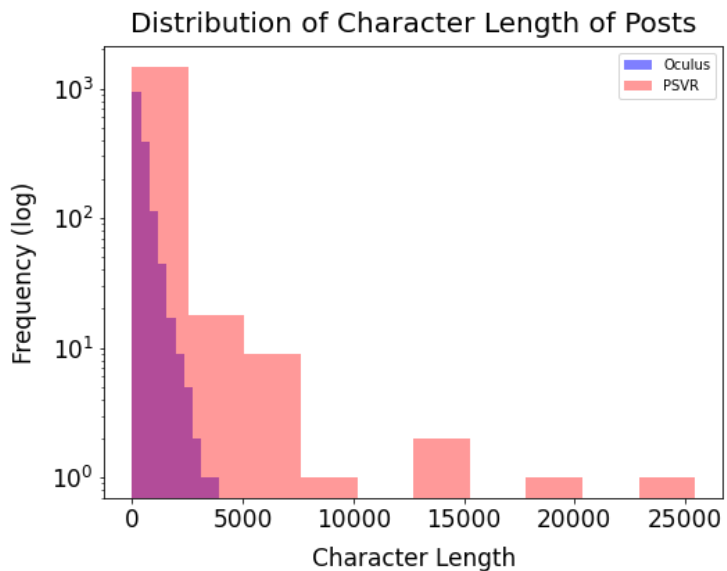
PLAYSTATION

- VR
- 99
- Https
- Com
- Game

IN COMMON

- VR
- Just
- Game
- Https
- Oculus

DISTRIBUTIONS

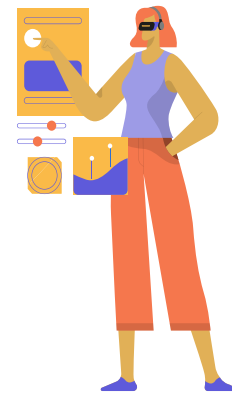
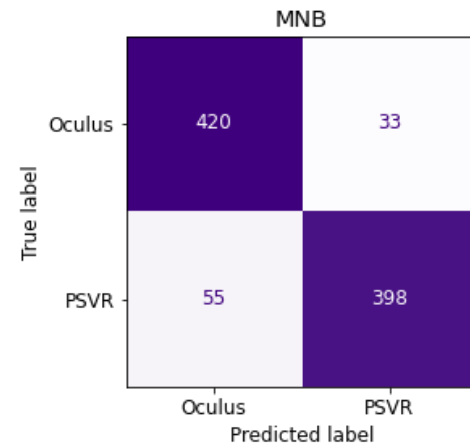
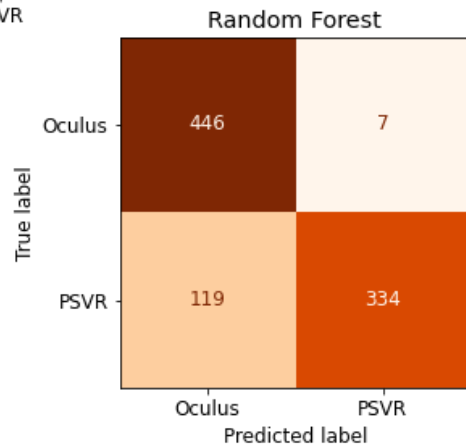
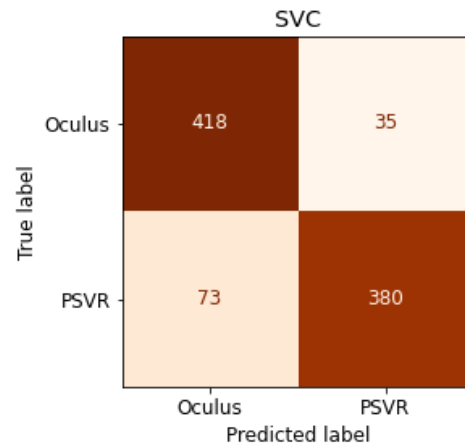
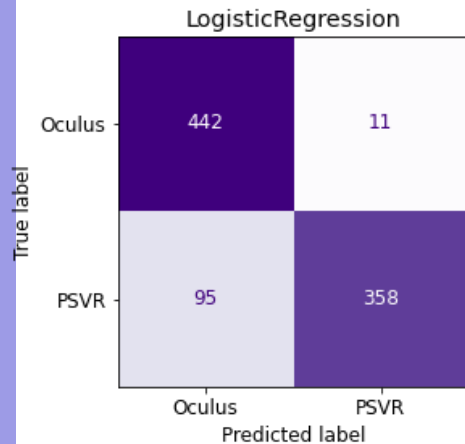




MODELS

Model	IDF/CV	Features	Train Score	Test Score
MNB	CV	5000	0.950	0.902
RF	IDF	1000	0.870	0.860
SVC	IDF	6000	0.997	0.880
LogReg	CV	3000	0.899	0.884

CONFUSION MATRIX





MODELS

Model	Train Score	Test Score	Specificity	F1
MNB	0.950	0.902	0.924	0.900
RF	0.870	0.860	0.984	0.841
SVC	0.997	0.880	0.915	0.875
LogReg	0.899	0.884	0.918	0.875

LOOKS LIKE MNB IS
THE BEST MODEL!

		MNB	
True label	Oculus	420	33
	PSVR	55	398
		Oculus	PSVR
		Predicted label	



CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

- Best Model: MNB with Count Vectorization
- This model had the best Accuracy, Misclassification, Recall, and F1 Score
- Still needs work: 9% Misclassification

RECOMMENDATIONS

- Analyze misclassifications & Optimize for Recall
- More feature fine tuning
 - Try adding UTC and/or title
 - Try other text processing methods
- Test out other models with different parameters
- Test other pairs of subreddit

THANKS!



Do you have any questions?

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SOURCES

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IMAGES/INFO

- Oculus Logo
- PSVR Logo
- Oculus Image
- PSVR Image
- VR Definition
- /r/oculus
- /r/PSVR/
- Pushshift API