

Reddit Vaccine Myths Topic Distributions

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Aim

- To analyze the topics and misconceptions regarding vaccines through the r/VaccineMyths subreddit.
- Understanding vaccine hesitancy and misinformation, to help public health organizations, policymakers, and researchers to address this issue more effectively

The image shows two screenshots of tweets from the r/VaccineMyths subreddit. The top tweet is from a user whose profile picture is blurred, replying to @DocEMurray. The text of the tweet is: "If vaccines were healthy, you could put it on a spoon and eat it. Try it, you'll die". It was posted on 6/10/18 at 10:51 AM. Below the tweet are icons for retweet, like, and reply. The bottom tweet is from a user with a profile picture containing a large letter 'S', replying to the previous user and @DocEMurray. The text of the tweet is: "If broccoli was healthy, you could put it in a syringe and inject it into your bloodstream. Try it, you'll die". Both tweets have similar sets of interaction icons below them.

Replies to @DocEMurray

If vaccines were healthy, you could put it on a spoon and eat it. Try it, you'll die
6/10/18, 10:51 AM

1 Retweet 1 Like

Replies to @DocEMurray and @DocEMurray

If broccoli was healthy, you could put it in a syringe and inject it into your bloodstream. Try it, you'll die

Data

- The data comes from the subreddit **r/VaccineMyths**, where people discuss various vaccine myths. It contains about 1600 unique posts.

title - relevant for posts

score - impact of the post (upvotes, comments)

id - The unique identifier for posts and comments

url - The url of the post thread

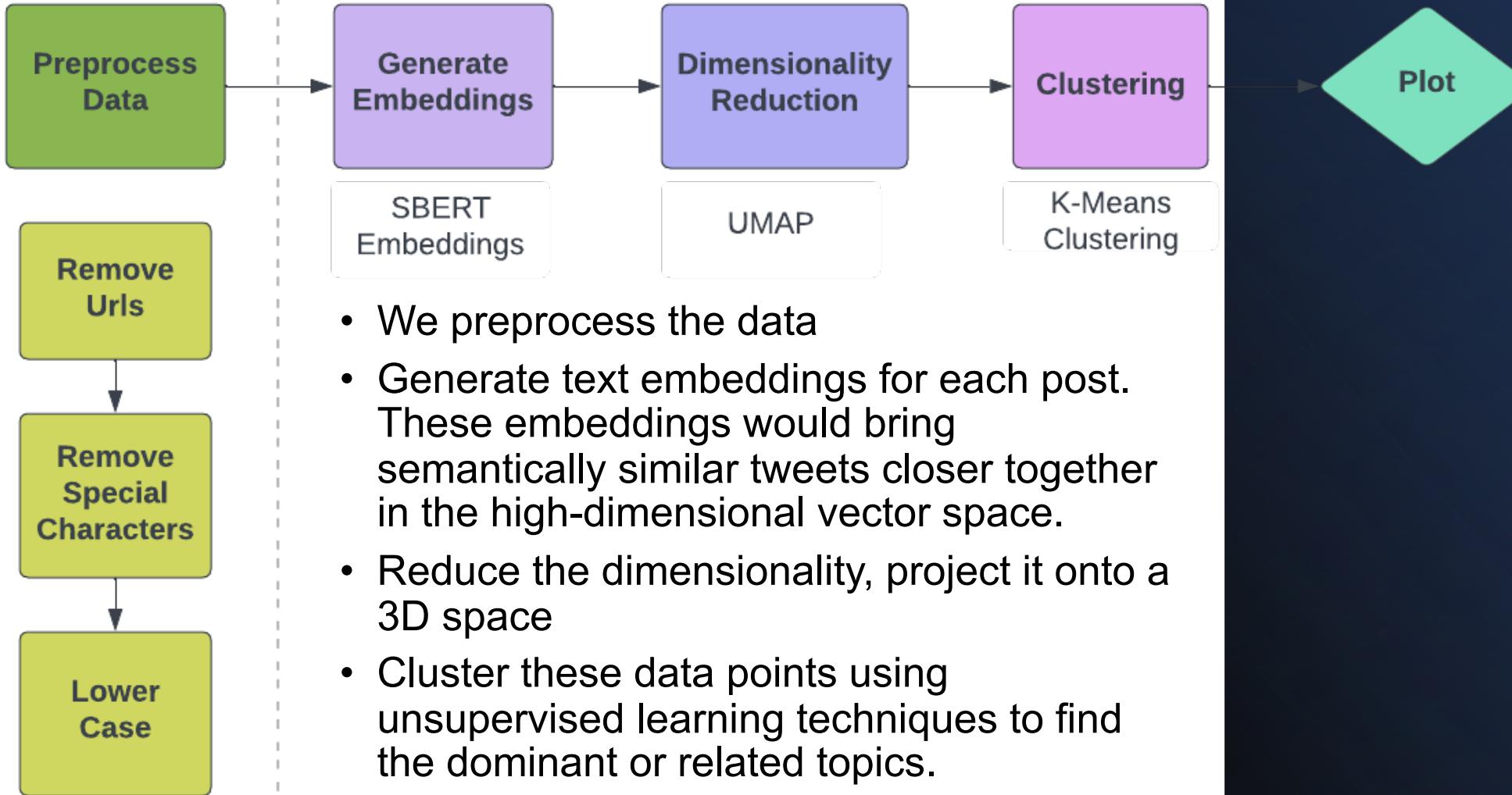
commns_num - number of comments

created - date of creation of the post

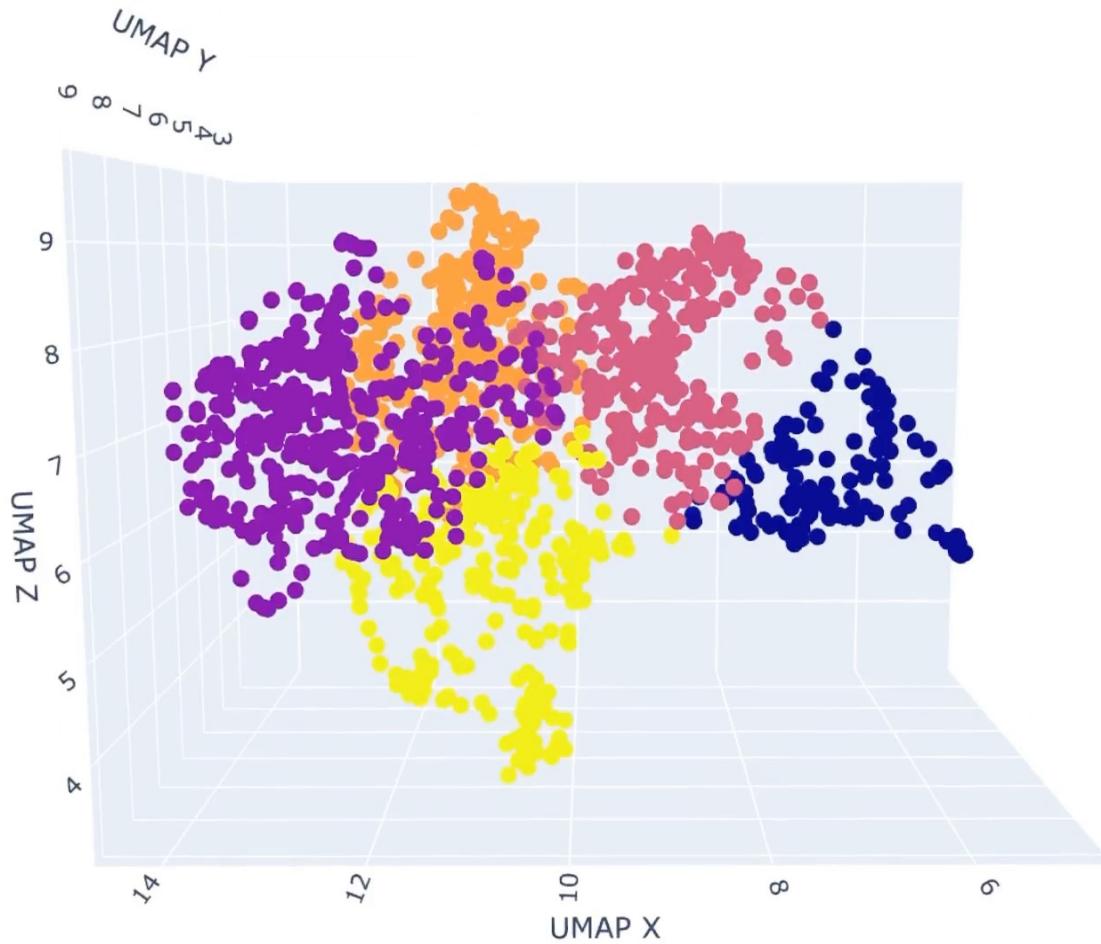
body - The text of the post or comment

	title	score	id	url	comms_num	created	body
0	Health Canada approves AstraZeneca COVID-19 va...	7	lt74vw	https://www.canadaforums.ca/2021/02/health-can...	0	1.614400e+09	NaN
1	COVID-19 in Canada: 'Vaccination passports' a ...	2	lsh0ij	https://www.canadaforums.ca/2021/02/covid-19-i...	1	1.614316e+09	NaN
2	Coronavirus variants could fuel Canada's third...	6	lohlle	https://www.canadaforums.ca/2021/02/coronaviru...	0	1.613887e+09	NaN
3	Canadian government to extend COVID-19 emergen...	1	lnptv8	https://www.canadaforums.ca/2021/02(canadian-g...	0	1.613796e+09	NaN
4	Canada: Pfizer is 'extremely committed' to mee...	6	lkslm6	https://www.canadaforums.ca/2021/02(canada-pfi...	0	1.613468e+09	NaN

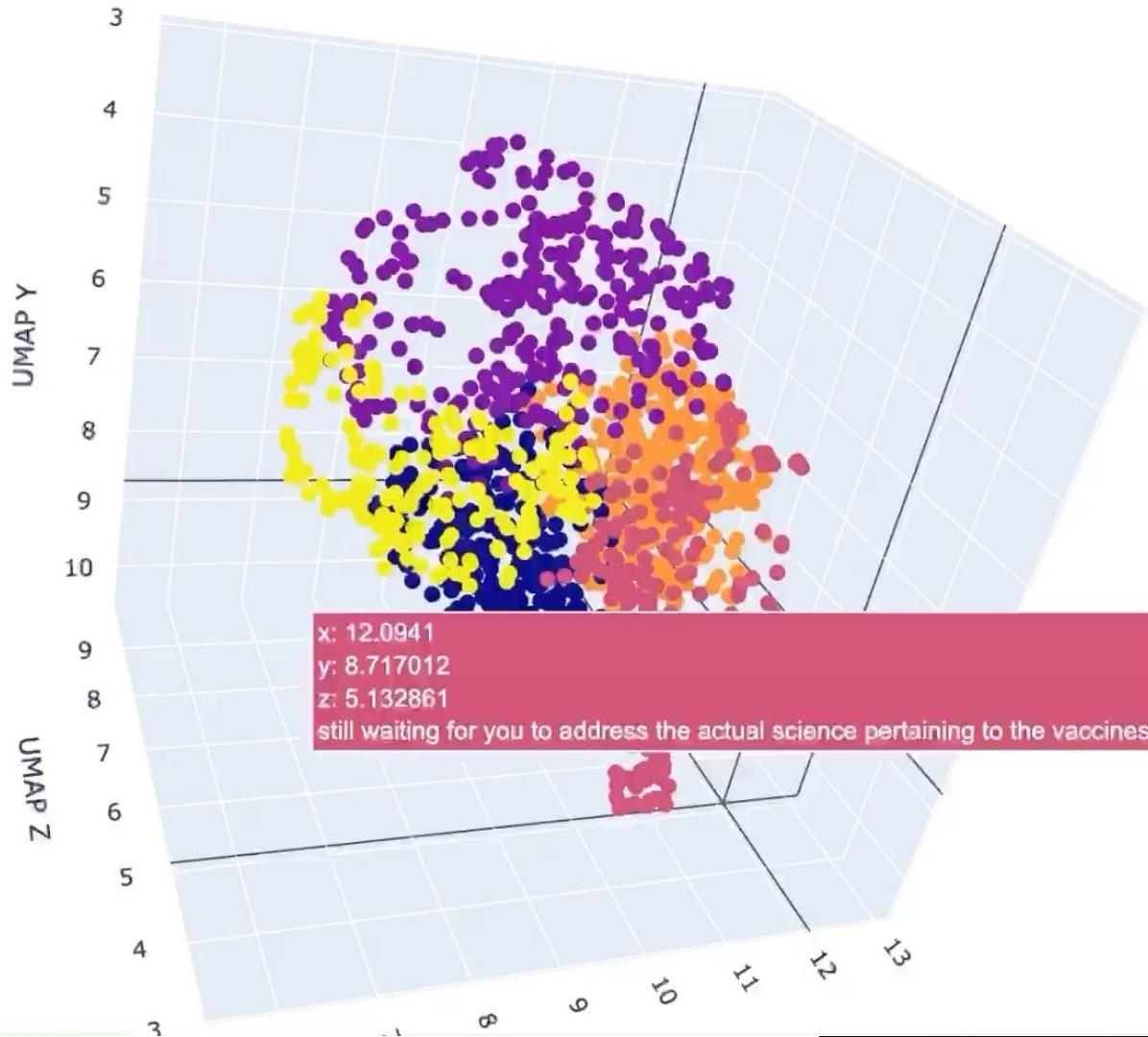
Methodology



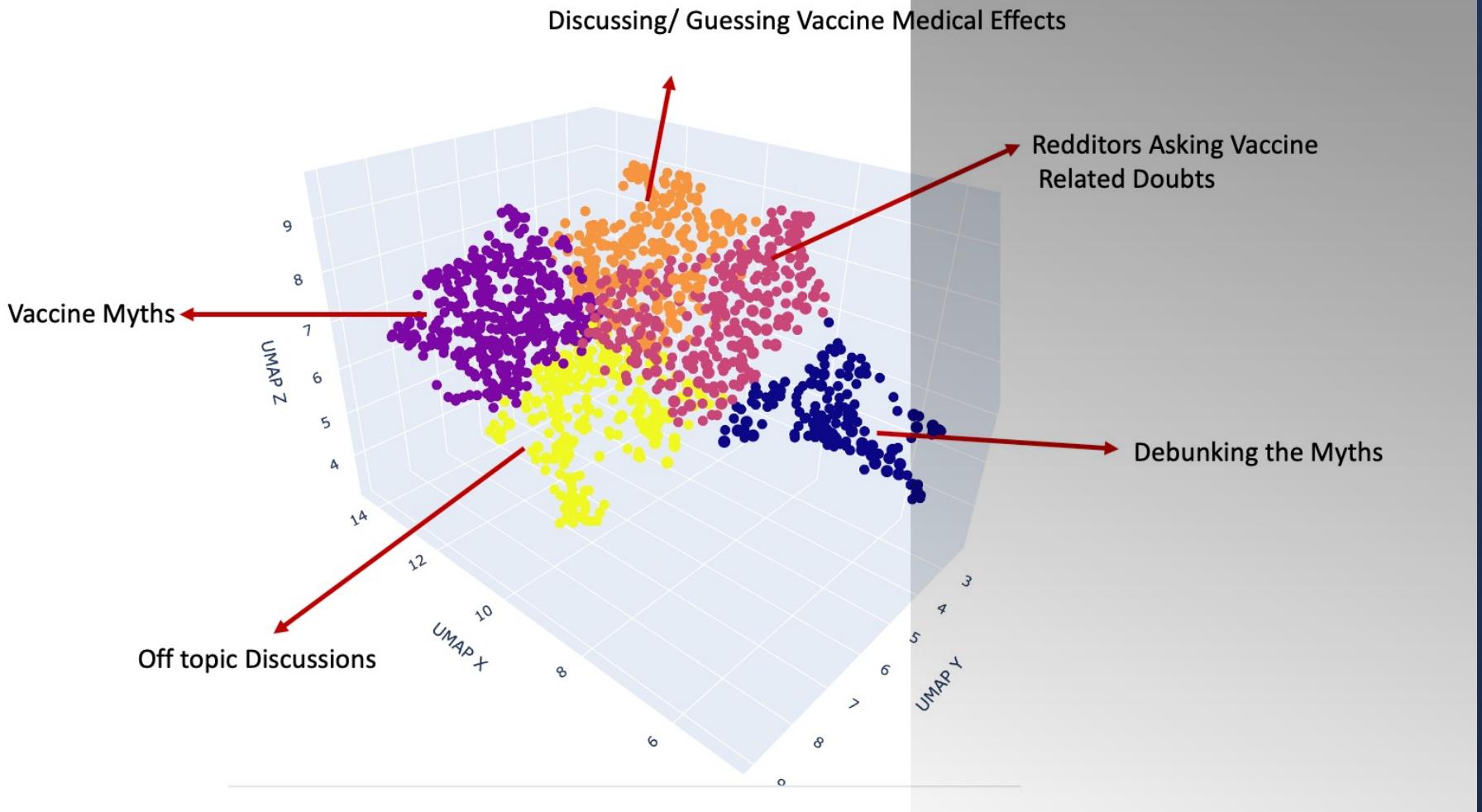
Visualization



Visualization



Visualization



Accuracy of Clustering

- We used the silhouette score to measures how well each data point fits into its assigned cluster
- Silhouette score is based on the average distance between the data point and other points in its own cluster versus the average distance to the nearest neighboring cluster.
- A higher silhouette score indicates better-defined clusters
- Score of 0.72

Conclusion & Future Scope

- Public health organizations, policymakers, and researchers must work together to address the underlying reasons for vaccine hesitancy and combat misinformation.
- In the future we can add 4th dimension in terms of time axis to visualize how topics change through different periods.



Thank You!