Social Media Security

Distributed Systems

Introduction

This distributed application is designed to analayze the social media security of our users. They can analyze which is the personal information that they make public in their social media accounts. Specifically, they can analyze their Facebook and Twitter accounts. The objective is raise awareness among users that they can put a lot of personal information public, and this can be a risk because the hackers can use social engineering to condition their ideologies or decisions. Even thieves can take advantage of this information to find out where you live and rob your home if you are on holidays.

This software implements serverless architecture and use IBM Cloud Functions to execute this app. Also, we used Lithops API to execute IBM Cloud Functions and store user's data in IBM Object Storage. Therefore, we use an object-oriented storage architecture.

Now, let's analyze the information produced by our application. We used the Hillary Clinton, Barack Obama and Mufti Menk (Imam) profiles to generate the analyzed data.

```
2021-06-20 01:06:59,862 [INFO] lithops.config -- Lithops v2.3.4
2021-06-20 01:07:00,130 [INFO] lithops.storage.backends.ibm_cos.ibm_cos -- IBM COS Storage client
created - Region: eu-de
2021-06-20 01:07:00,131 [INFO] lithops.serverless.backends.ibm_cf.ibm_cf -- IBM CF client created -
Region: eu-gb - Namespace: ubenabdelkrim2@gmail.com_dev
2021-06-20 01:07:00,131 [INFO] lithops.executors -- Serverless Executor created with ID: 62e27e-0
2021-06-20 01:07:00,203 [INFO] lithops.storage.backends.ibm_cos.ibm_cos -- IBM COS Storage client
created - Region: eu-de
```

Hillary Clinton STATISTICS

```
Total number of words 4771 words
Mean number of words per tweet: 32.46 words
Total length of the dataset is: 33896 chars
Mean length of a tweet is:  231.0 chars
```

Out[552]:

	Word	FrequencyRepublican
0	good	1
1	security	0
2	great	6
3	unite	0
4	senate	3
5	thank	2
6	meet	0
7	hear	2
8	join	11
9	government	2
10	flag	0
11	church	0
12	unemployment	0
13	regulation	0
14	obamacare	0

Out[553]:

	Word	FrequencyIslam
0	allah	0
1	fatwa	0
2	hadj	0
3	hajj	0
4	hijjah	0
5	islam	0
6	mecca	0
7	muhammad	0
8	mosque	0
9	muslim	0
10	prophet	0
11	ramadan	0
12	salam	0
13	salaam	0
14	sharia	0

Out[554]:

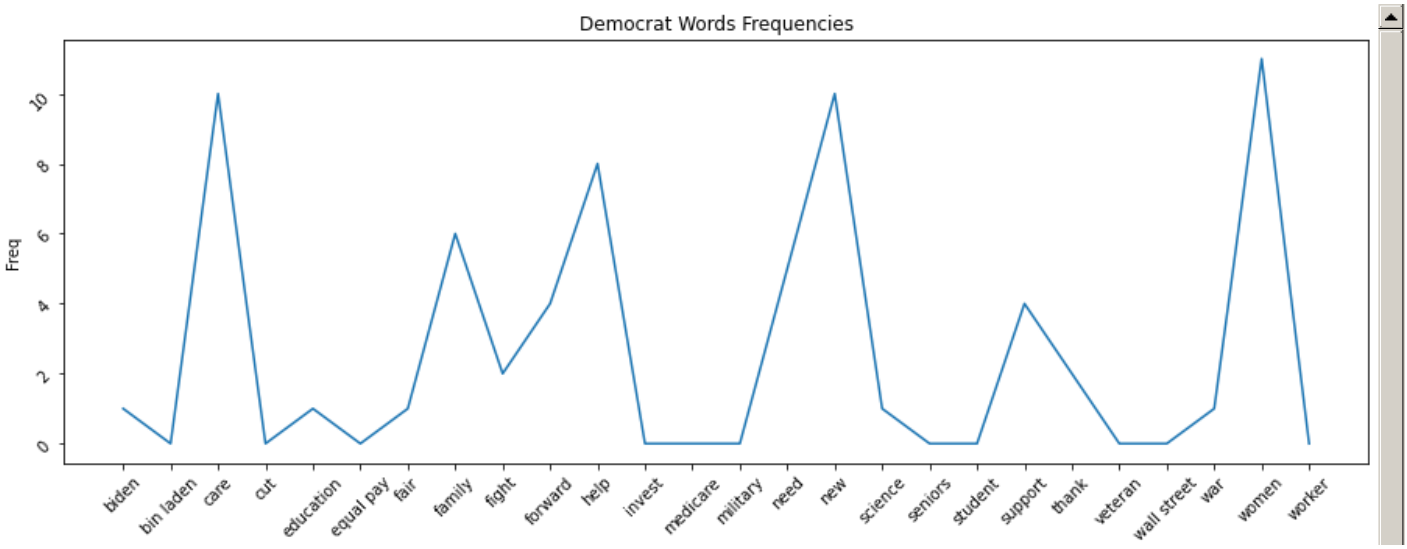
	Word	FrequencyCatholic
0	apostle	0
1	assembly	0
2	bible	0
3	blessed sacrament	0
4	celebrant	0
5	discernment	0
6	disciple	0
7	easter	1
8	gospel	0
9	eucharist	0
10	grace	0
11	communion	0
12	holy water	0
13	jesus	0
14	christ	0

Out[555]:

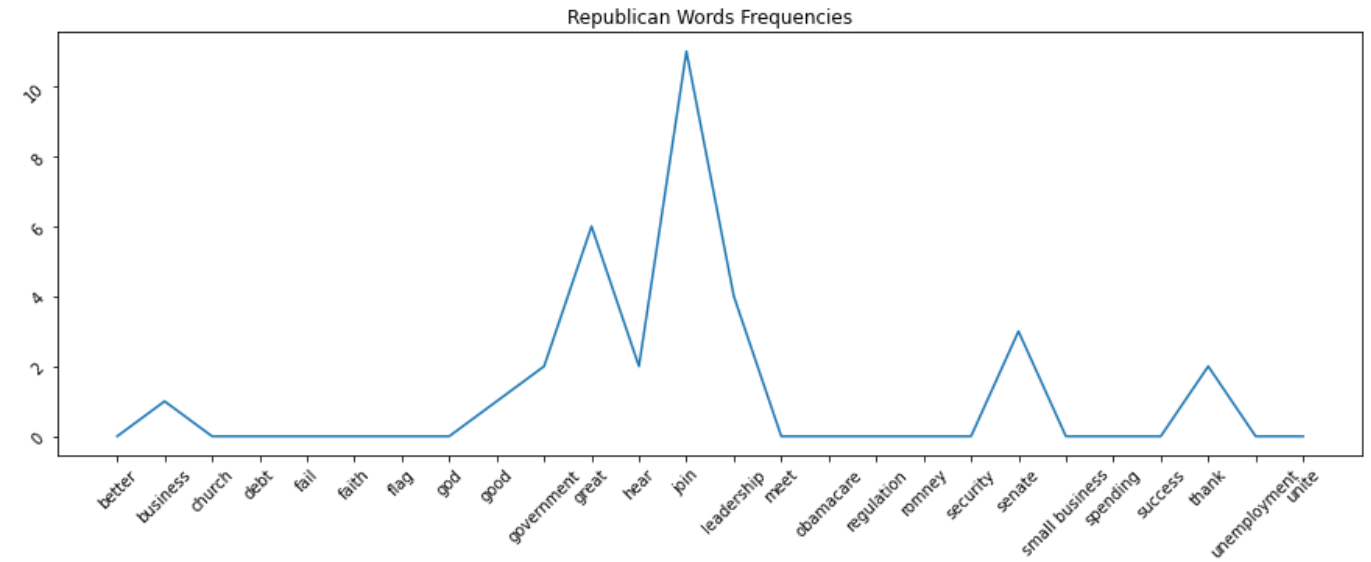
	Word	FrequencyJewish
0	torah	0
1	shalom	0
2	kosher	0
3	chutzpah	0
4	kippah	0
5	mazel tov	0
6	adar	0
7	achashverosh	0
8	bimah	0
9	daven	0
10	gelilah	0
11	hakafot	0
12	halachah	0
13	iyar	0
14	kiddish	0

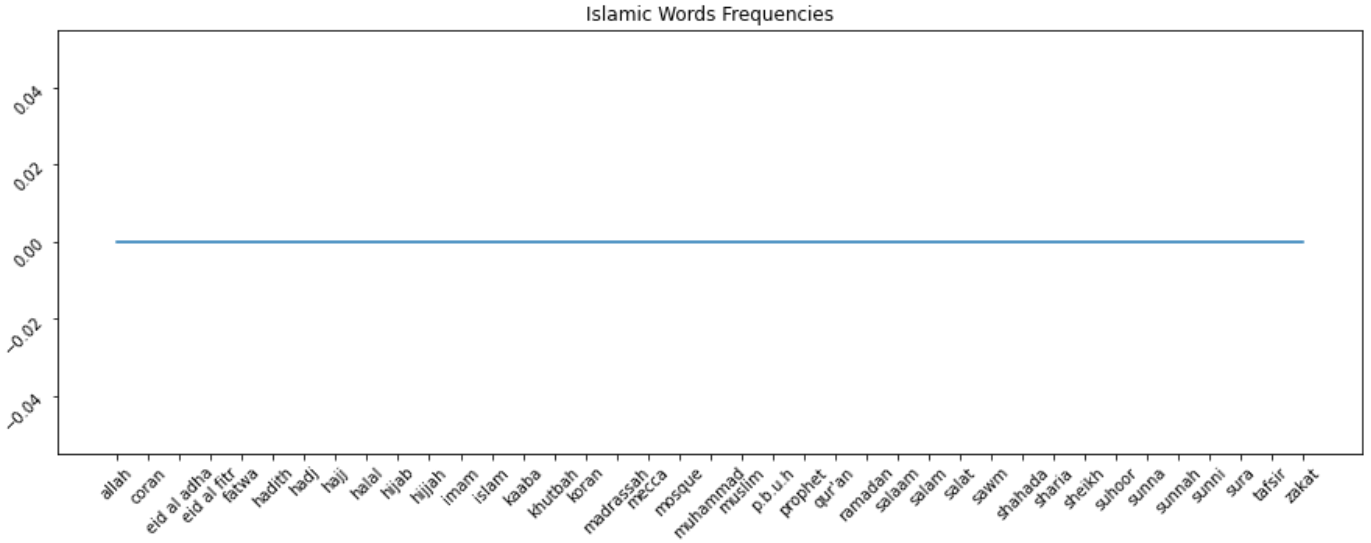
Out[556]:

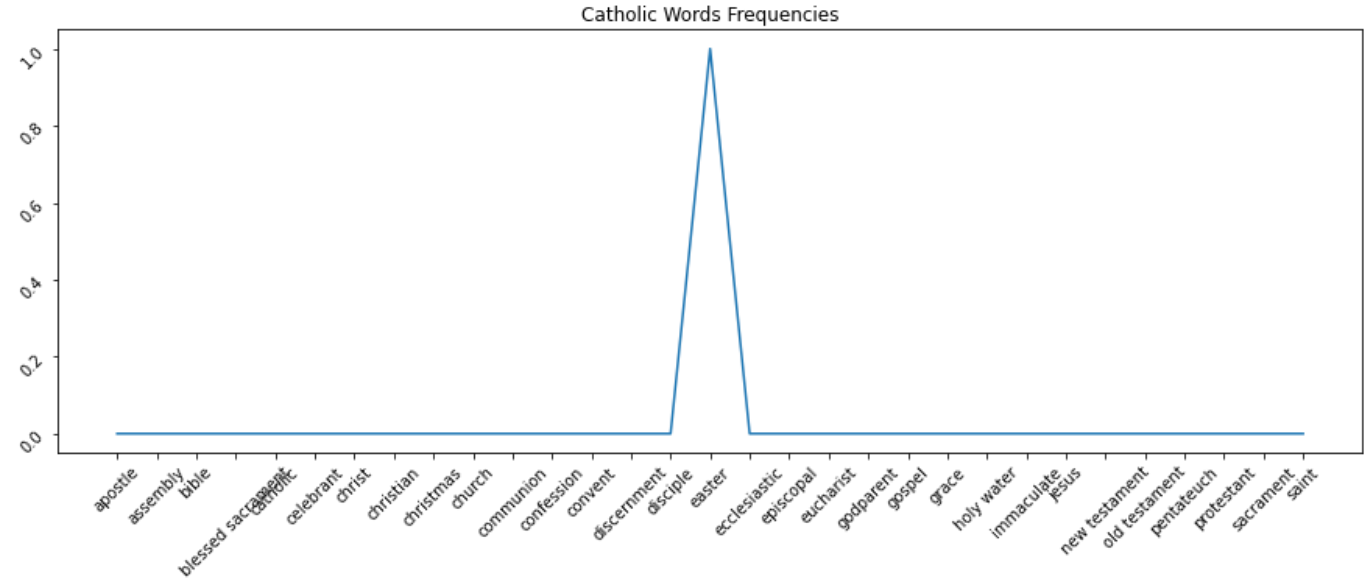
	Word	FrequencyBudism
0	ajahn chah	0
1	advaita vedanta	0
2	ayya khema	0
3	bhikkhu payutto	0
4	buddha	0
5	buddhism	0
6	buddhist	0
7	chan	0
8	chi kung	0
9	dana	0
10	dharma	0
11	dhamma	0
12	gelugpa	0
13	jhana	0
14	koan	0

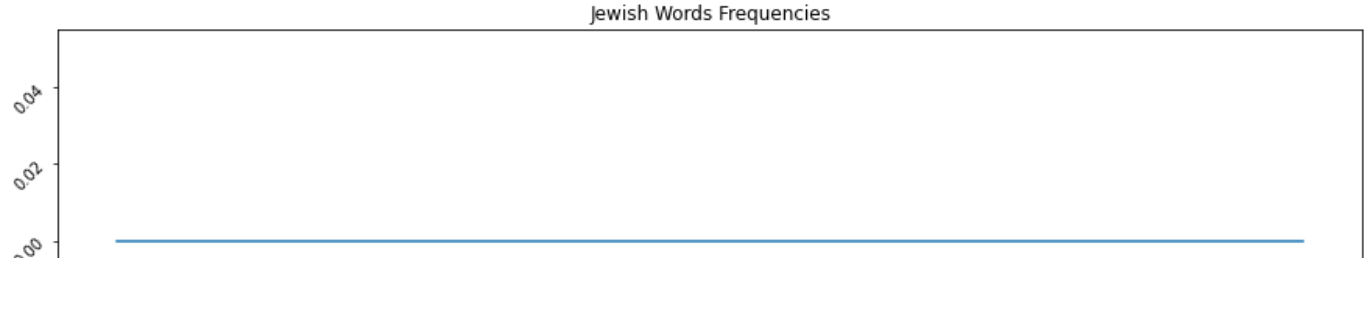


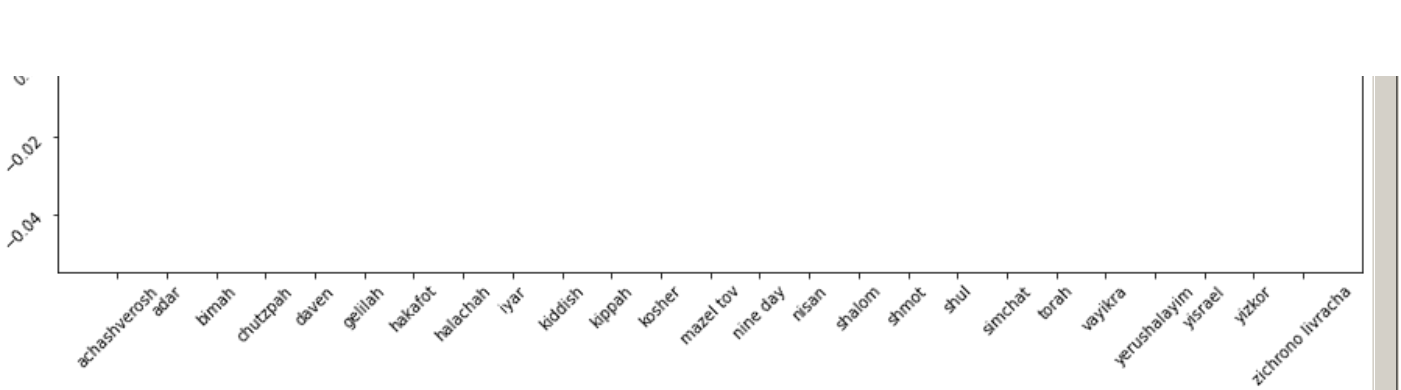
Words

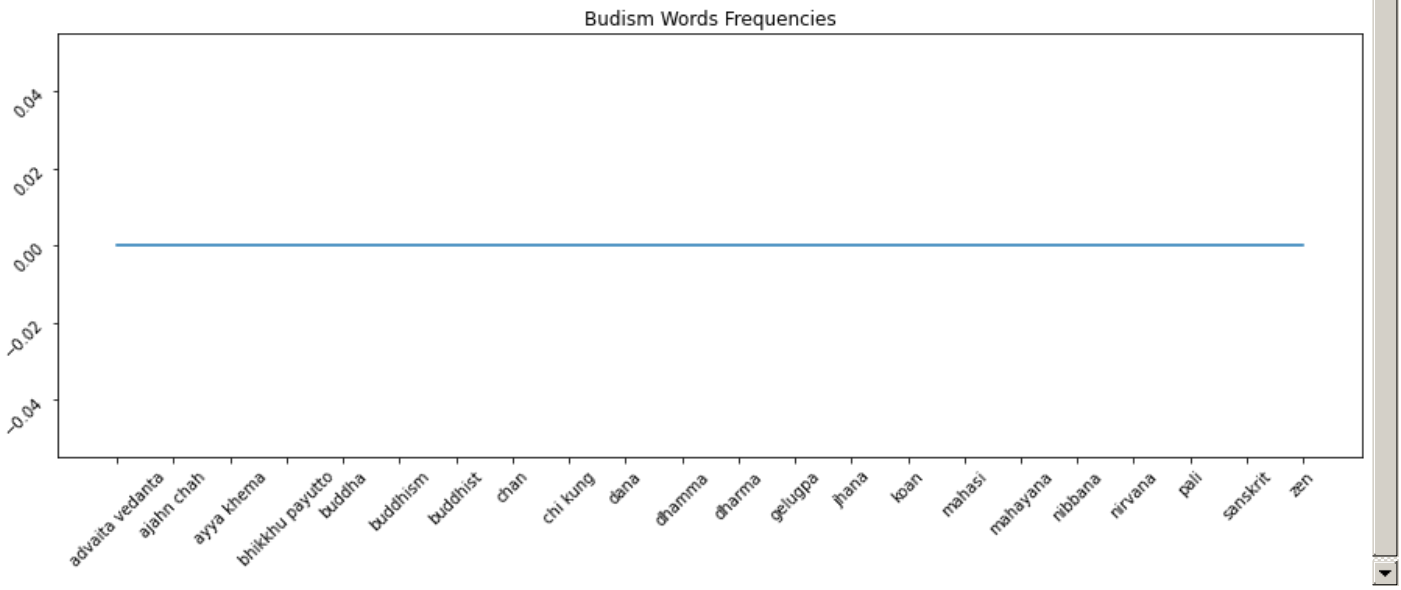

Republican Words Frequencies
0
2
4
6
8
10
better
business
church
debt
fail
faith
flag
god
good
government
great
hear
join
leadership
meet
obamacare
regulation
romney
security
senate
small business
spending
success
thank
unemployment
unite


Islamic Words Frequencies
−0.04
−0.02
0.00
0.02
0.04
allah
coran
eid al adha
eid al fitr
fatwa
hadith
hadj
hajj
halal
hijab
hijiah
imam
islam
kaaba
khutbah
koran
madrassah
mecca
mosque
muhammad
muslim
p.b.u.h
prophet
qur'an
ramadan
salaam
salam
salat
sawm
shahada
sharia
sheikh
suhoor
sunna
sunnah
sunni
sura
tafsir
zakat

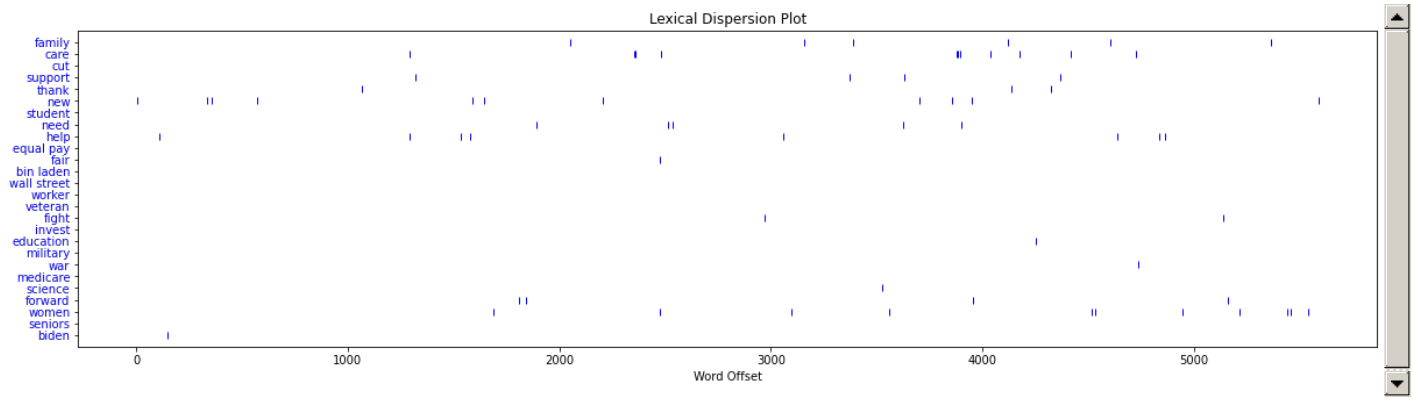

Catholic Words Frequencies
0.0
0.2
0.4
0.6
0.8
1.0
apostle
assembly
bible
blessed sacrament
catholic
celebrant
christ
christian
christmas
church
communion
confession
convent
discernment
disciple
easter
ecclesiastic
episcopal
eucharist
godparent
gospel
grace
holy water
immaculate
jesus
new testament
old testament
pentateuch
protestant
sacrament
saint


Jewish Words Frequencies
0.02
0.04

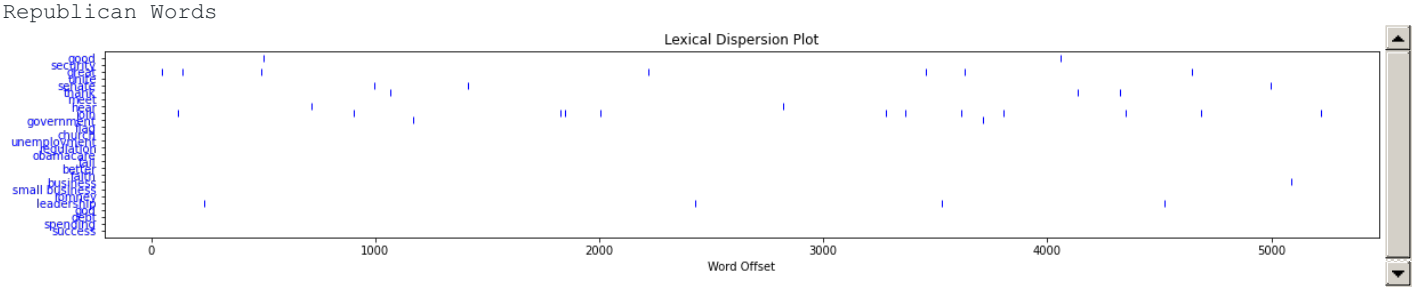

−0.02
−0.04
achashverosh
adar
bimah
chutzpah
daven
geliliah
hakafot
halachah
iyar
kiddish
kippah
kosher
mazel tov
nine day
nisan
shalom
shmot
shul
simchat
torah
vayikra
yerushalayim
yisrael
yizkor
zichrono livracha


Budism Words Frequencies
0.04
0.02
0.00
−0.02
−0.04
advaita vedanta
ajahn chah
ayya khema
bhikkhu payutto
buddha
buddhism
buddhist
chan
chi kung
dana
dhamma
dharma
gelugpa
jhana
koan
mahasi
mahayana
nibbana
nirvana
pali
sanskrit
zen

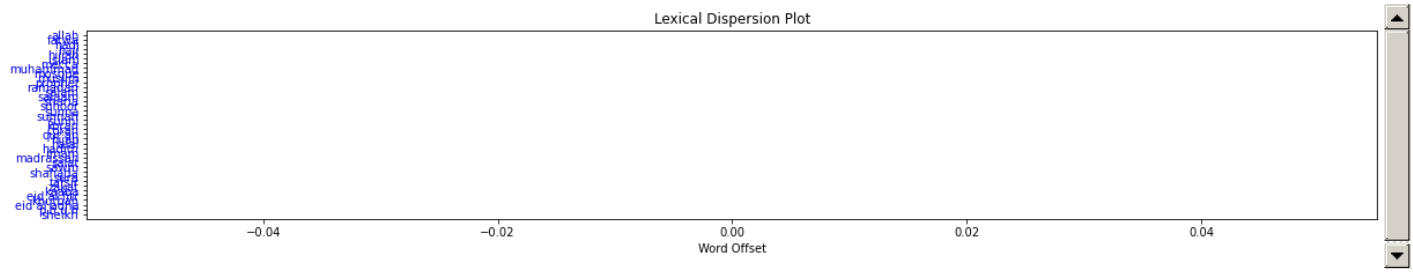
Demcorat Words



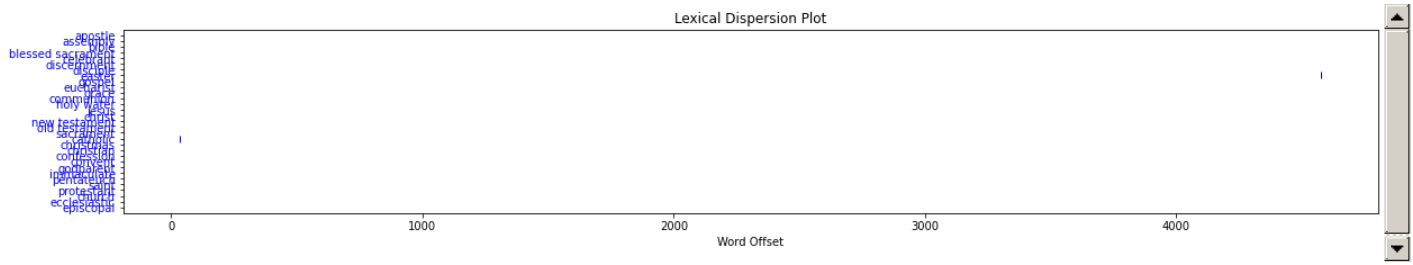
Republican Words



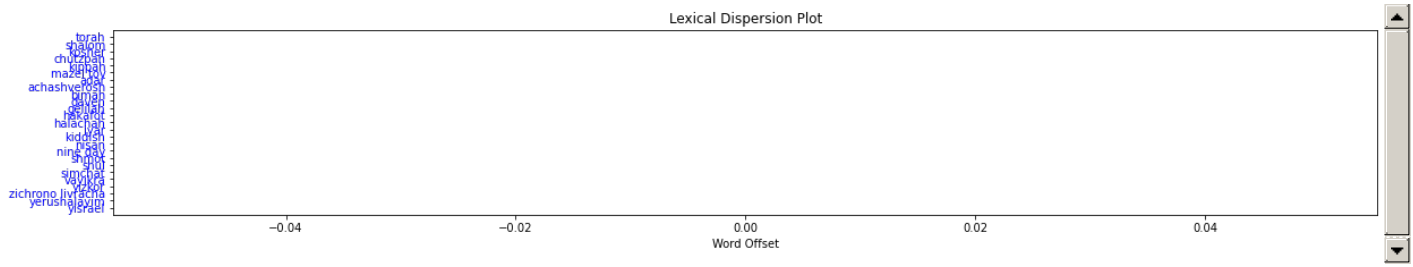
Islam Words



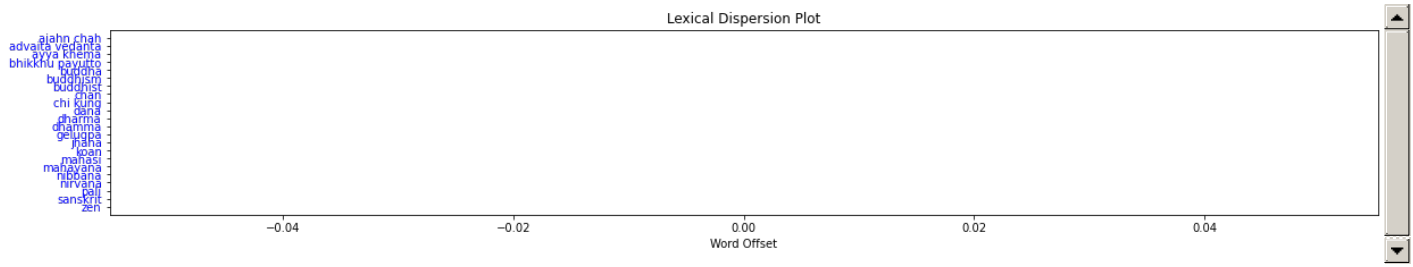
Catholic Words



Jewish Words



Budism Words



Barack Obama STATISTICS

Total number of words 8250 words
Mean number of words per tweet: 43.42 words
Total length of the dataset is: 54735 chars
Mean length of a tweet is: 288.0 chars

Out[563]:

	Word	FrequencyRepublican
0	good	12
1	security	0
2	great	12
3	unite	0
4	senate	4
5	thank	6
6	meet	0
7	hear	1
8	join	6
9	government	3
10	flag	1
11	church	0
12	unemployment	0
13	regulation	0
14	obamacare	0

Out[564]:

	Word	FrequencyIslam
0	allah	0
1	fatwa	0
2	hadj	0
3	hajj	0
4	hijjah	0
5	islam	0
6	mecca	0
7	muhammad	0
8	mosque	0
9	muslim	0
10	prophet	0
11	ramadan	0
12	salam	0
13	salaam	0
14	sharia	0

Out[565]:

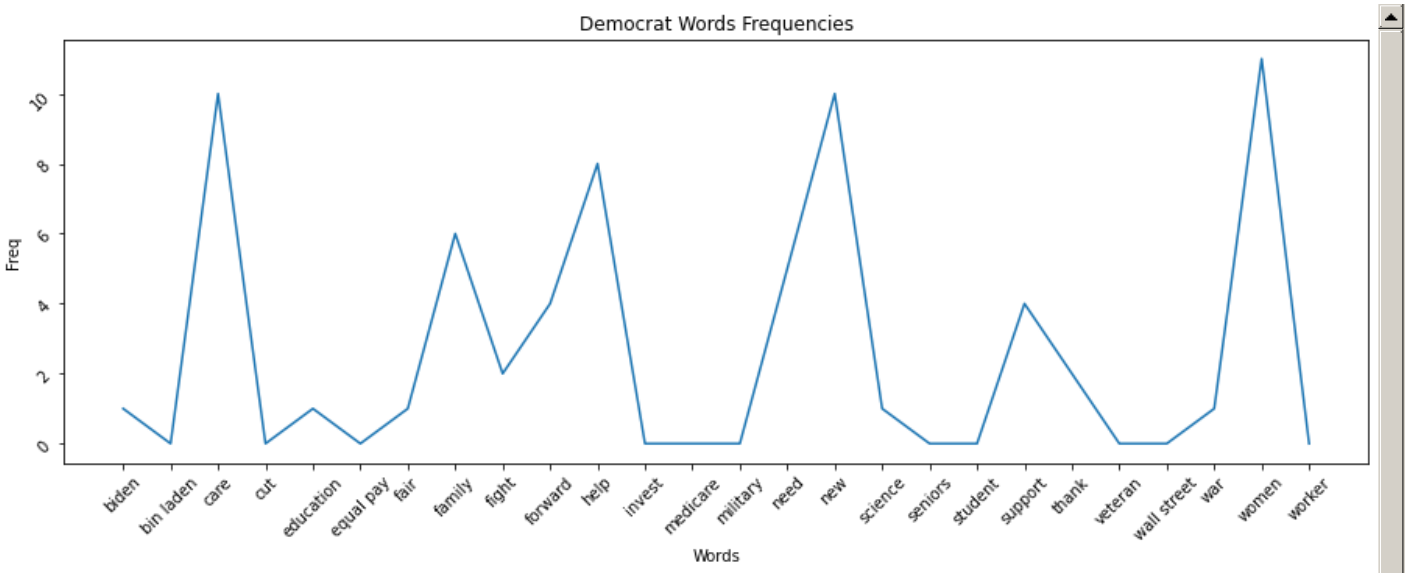
	Word	FrequencyCatholic
0	apostle	0
1	assembly	0
2	bible	0
3	blessed sacrament	0
4	celebrant	0
5	discernment	0
6	disciple	0
7	easter	1
8	gospel	0
9	eucharist	0
10	grace	0
11	communion	0
12	holy water	0
13	jesus	0
14	christ	0

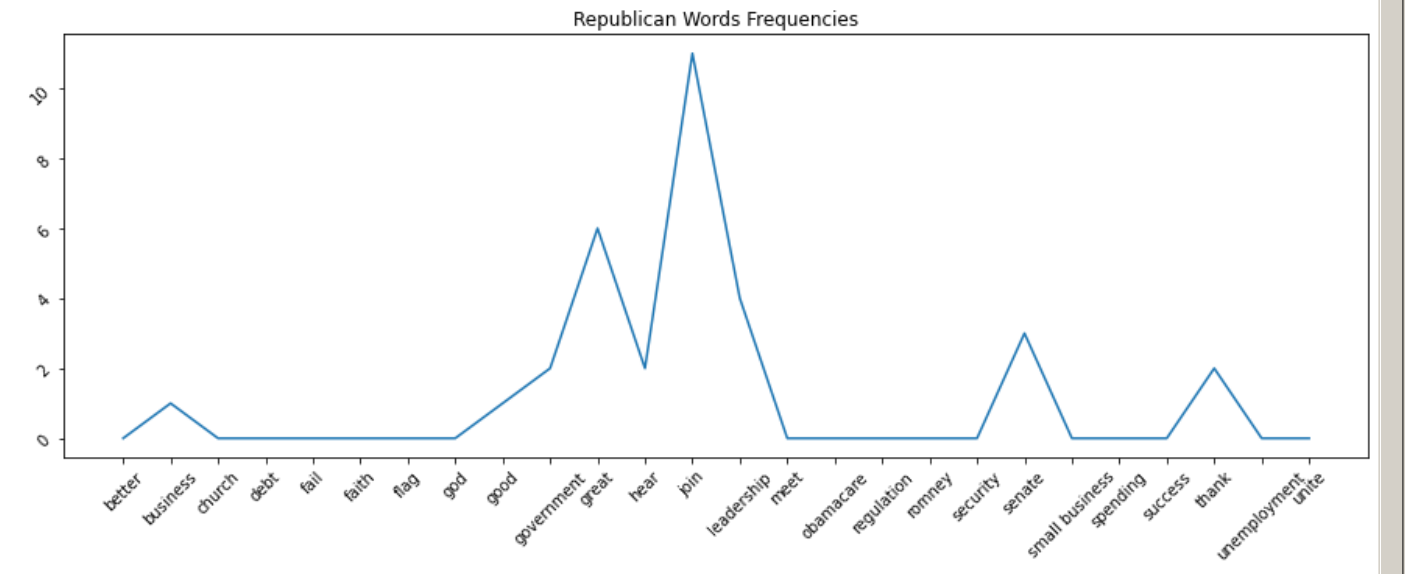
Out[566]:

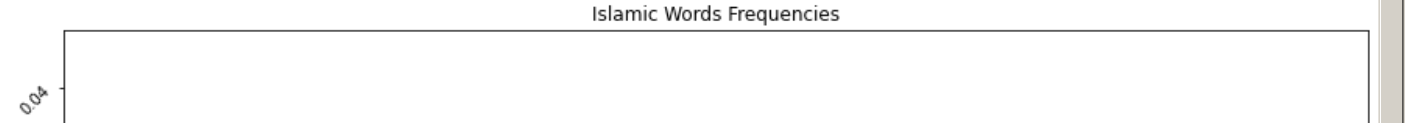
	Word	FrequencyJewish
0	torah	0
1	shalom	0
2	kosher	0
3	chutzpah	0
4	kippah	0
5	mazel tov	0
6	adar	0
7	achashverosh	0
8	bimah	0
9	daven	0
10	gelilah	0
11	hakafot	0
12	halachah	0
13	iyar	0
14	kiddish	0

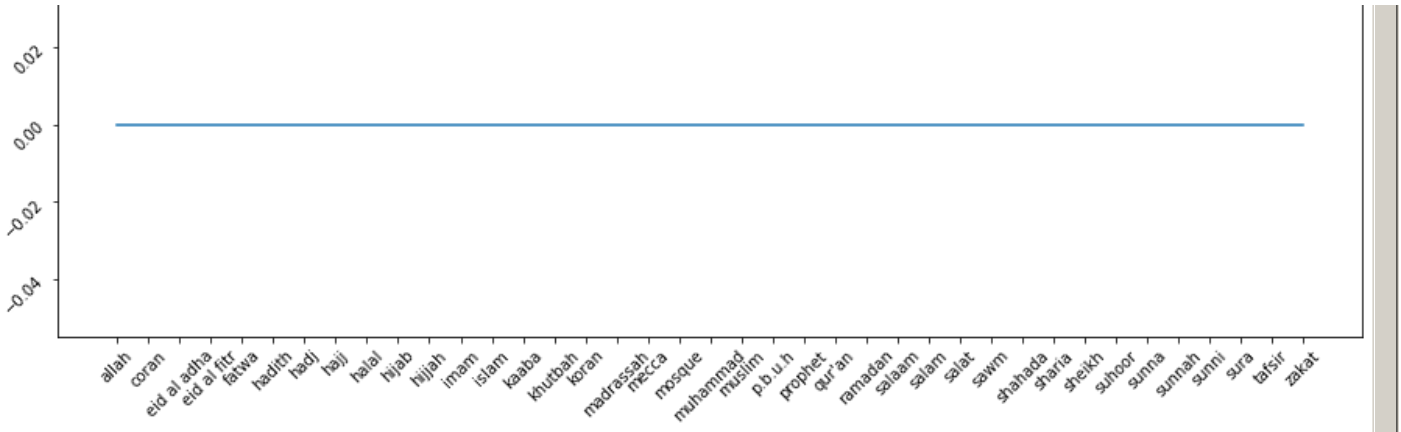
Out[567]:

	Word	FrequencyBudism
0	ajahn chah	0
1	advaita vedanta	0
2	ayya khema	0
3	bhikkhu payutto	0
4	buddha	0
5	buddhism	0
6	buddhist	0
7	chan	0
8	chi kung	0
9	dana	0
10	dharma	0
11	dhamma	0
12	gelugpa	0
13	jhana	0
14	koan	0

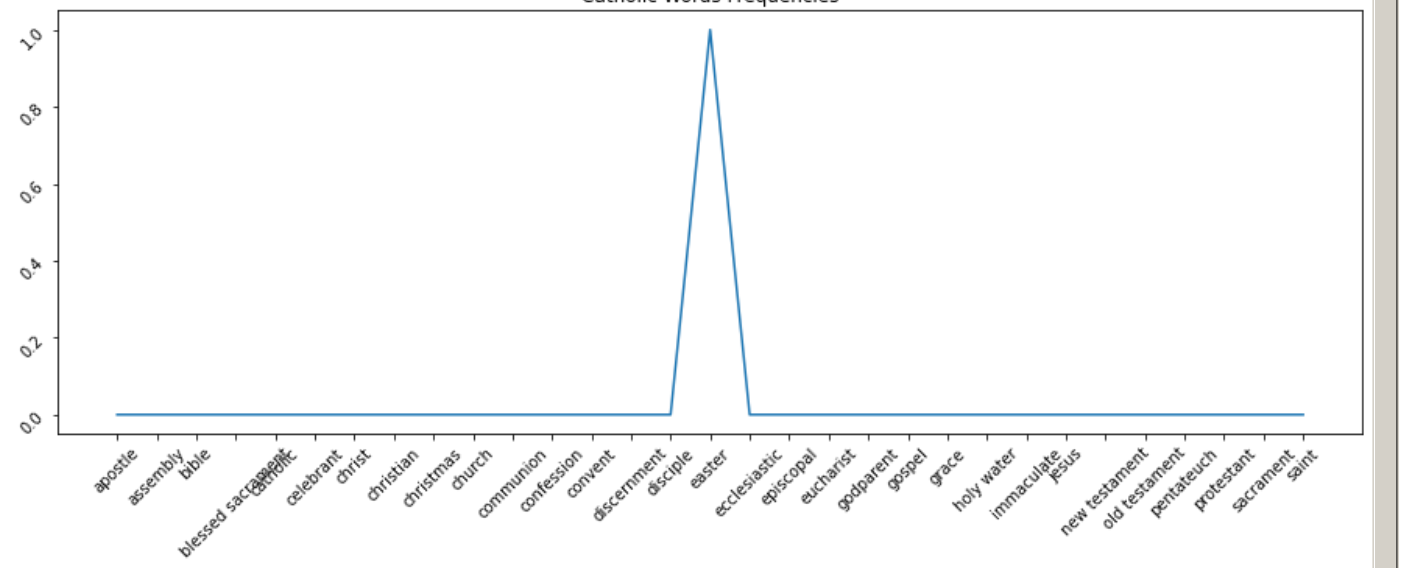




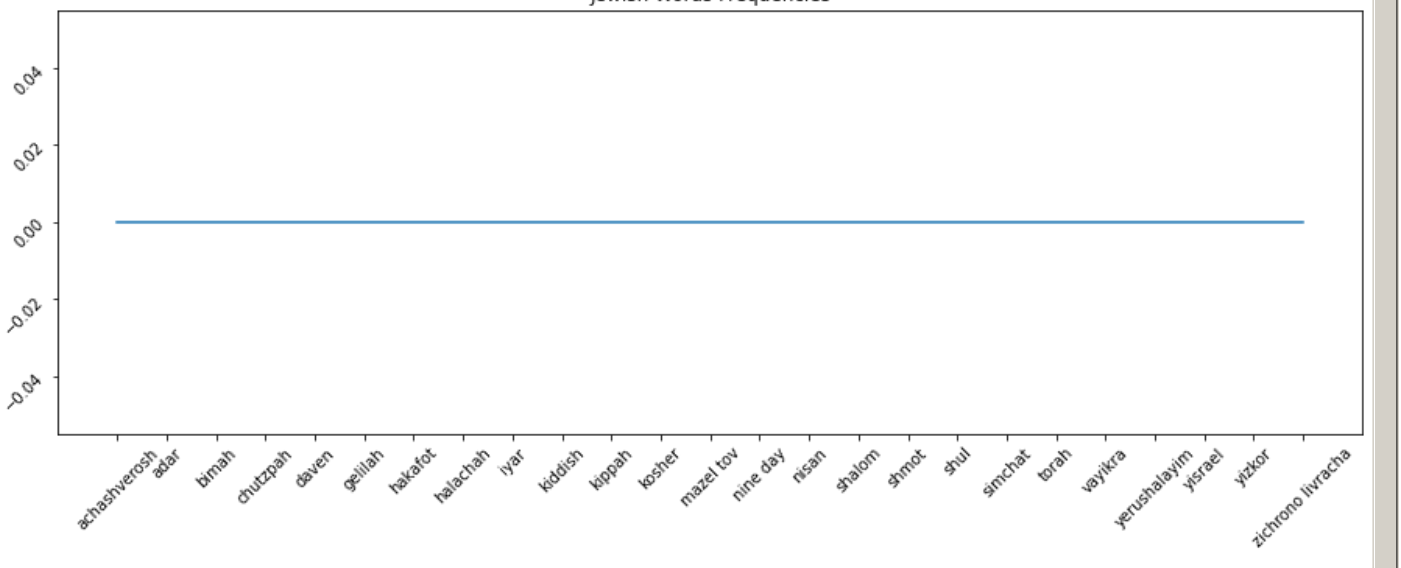




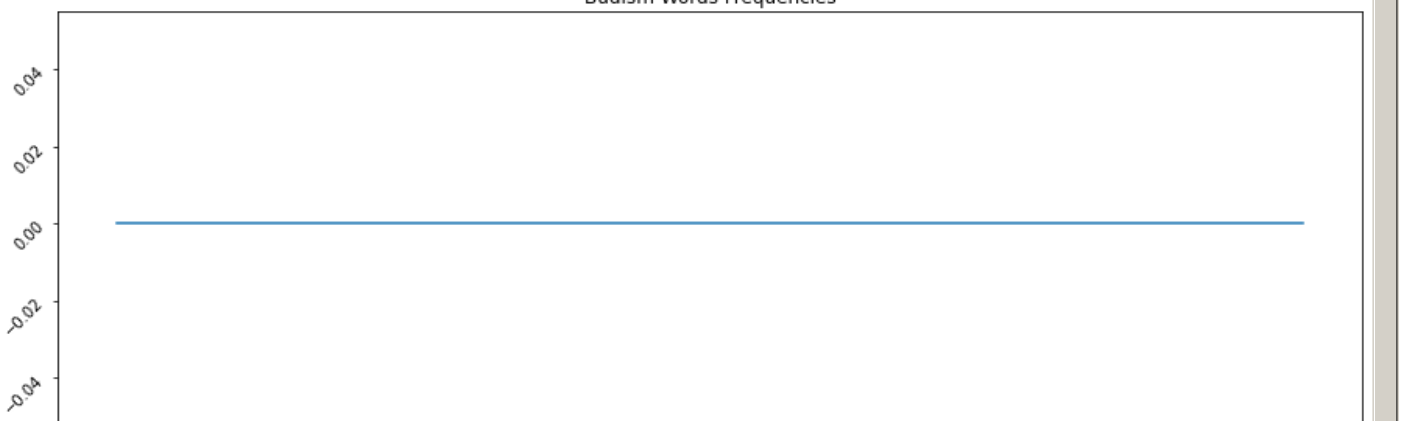
Catholic Words Frequencies

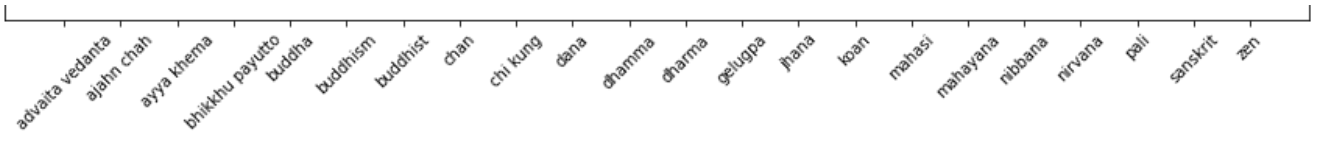


Jewish Words Frequencies

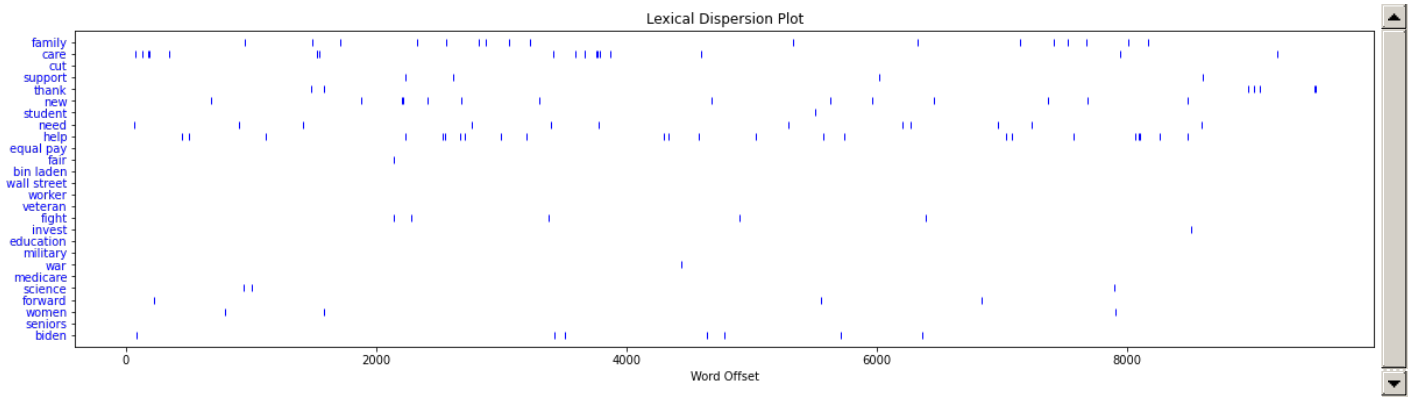


Budism Words Frequencies

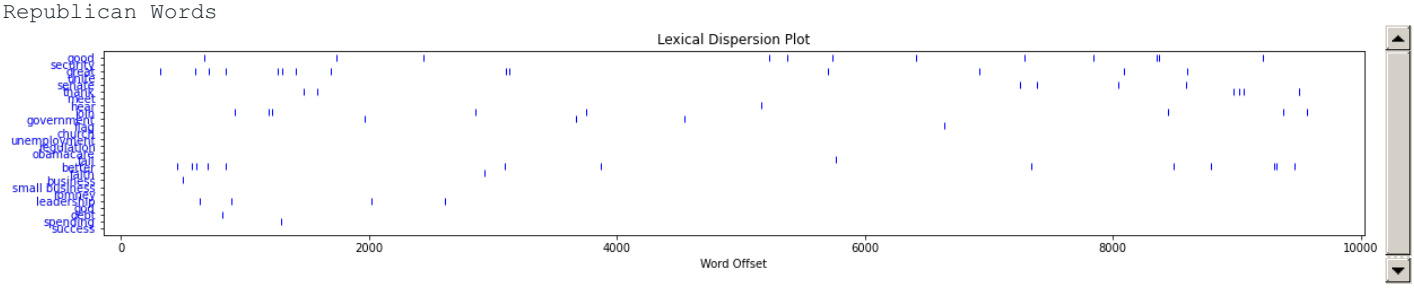




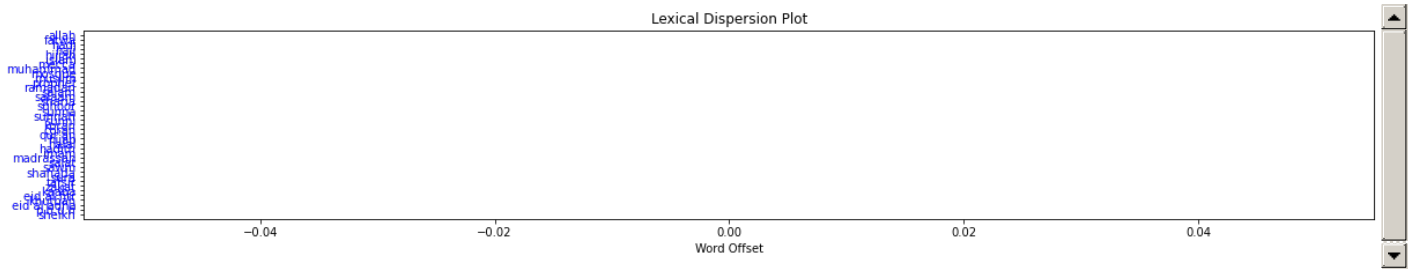
Demcorat Words



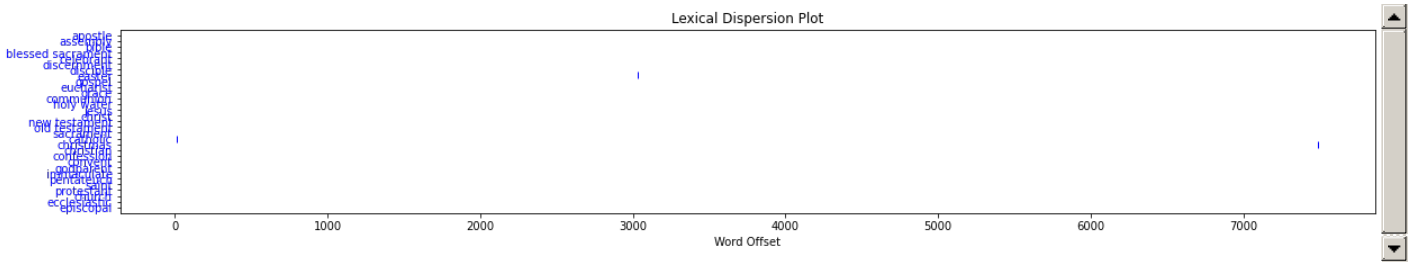
Republican Words



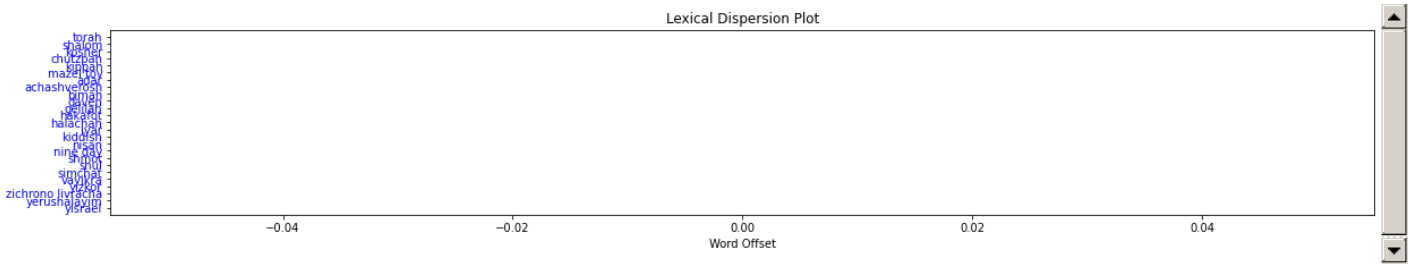
Islam Words



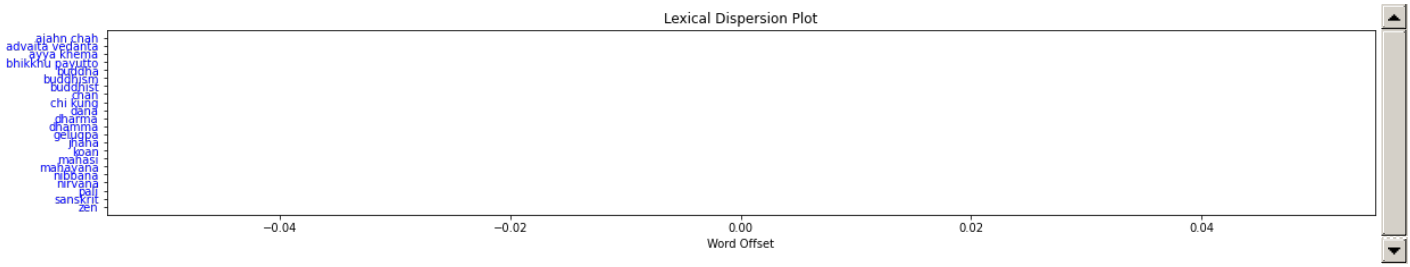
Catholic Words



Jewish Words



Budism Words



Mufti Menk (Muslim Imam)

```
Total number of words 10910 words
Mean number of words per tweet: 54.82 words
Total length of the dataset is: 68765 chars
Mean length of a tweet is:  346.0 chars
```

Out[572]:

	Word	FrequencyRepublican
0	good	32
1	security	0
2	great	2
3	unite	0
4	senate	0
5	thank	2
6	meet	0
7	hear	2
8	join	0
9	government	0
10	flag	0
11	church	0
12	unemployment	0
13	regulation	0
14	obamacare	0

Out[573]:

	Word	FrequencyIslam
0	allah	1
1	fatwa	0
2	hadj	0
3	hajj	0
4	hijjah	0
5	islam	0
6	mecca	0
7	muhammad	0
8	mosque	1
9	muslim	0
10	prophet	0
11	ramadan	14
12	salam	0
13	salaam	0
14	sharia	0

Out[574]:

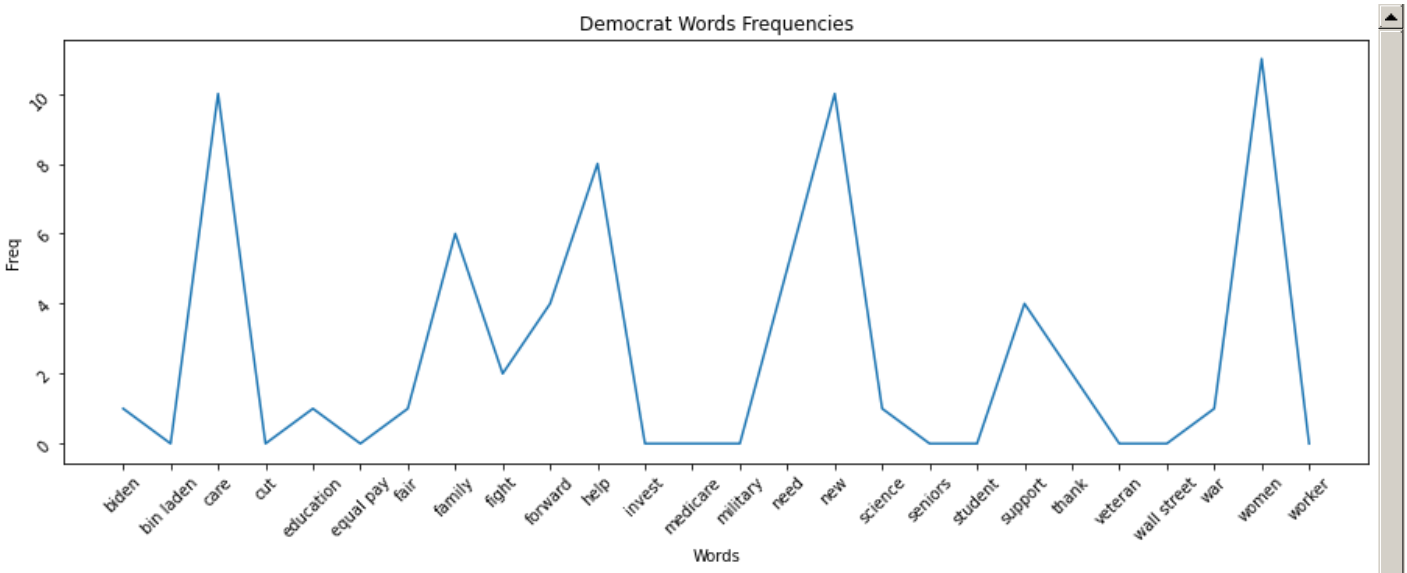
	Word	FrequencyCatholic
0	apostle	0
1	assembly	0
2	bible	0
3	blessed sacrament	0
4	celebrant	0
5	discernment	0
6	disciple	0
7	easter	0
8	gospel	0
9	eucharist	0
10	grace	0
11	communion	0
12	holy water	0
13	jesus	0
14	christ	0

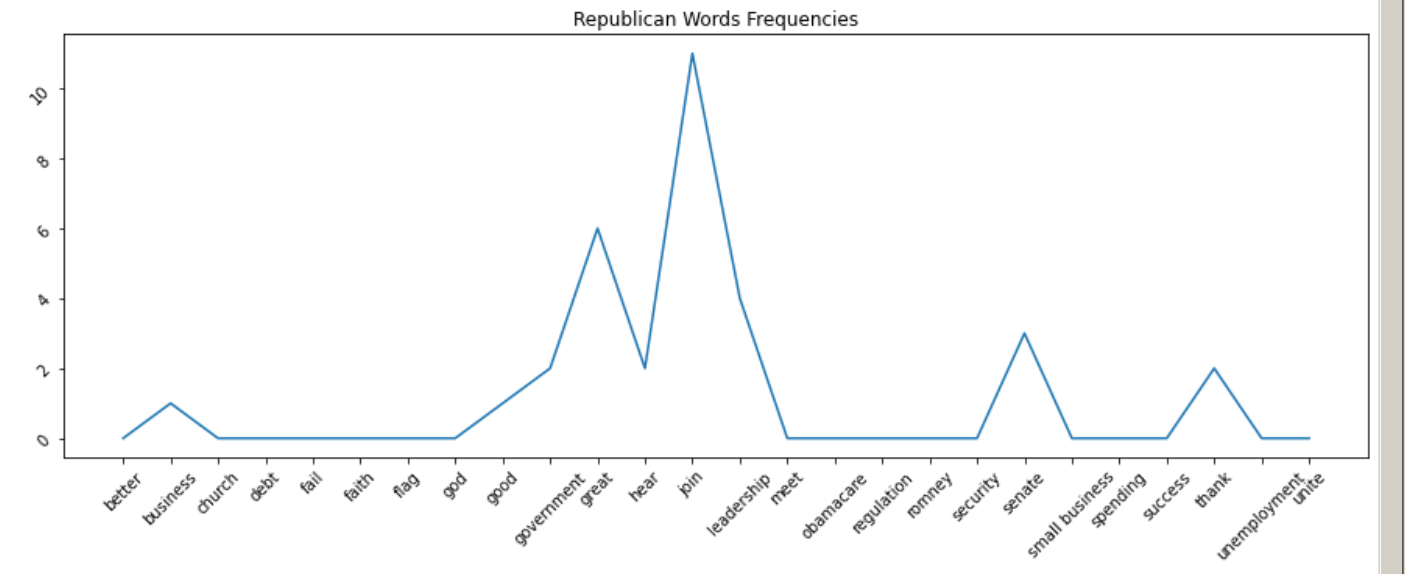
Out[575]:

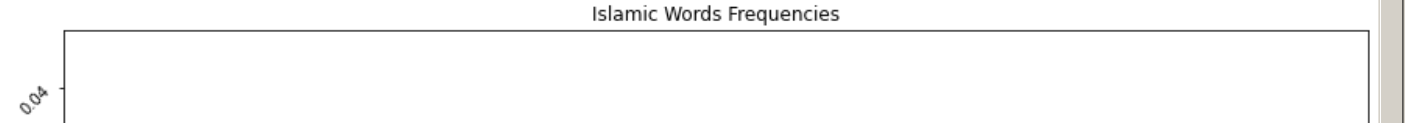
	Word	FrequencyJewish
0	torah	0
1	shalom	0
2	kosher	0
3	chutzpah	0
4	kippah	0
5	mazel tov	0
6	adar	0
7	achashverosh	0
8	bimah	0
9	daven	0
10	gelilah	0
11	hakafot	0
12	halachah	0
13	iyar	0
14	kiddish	0

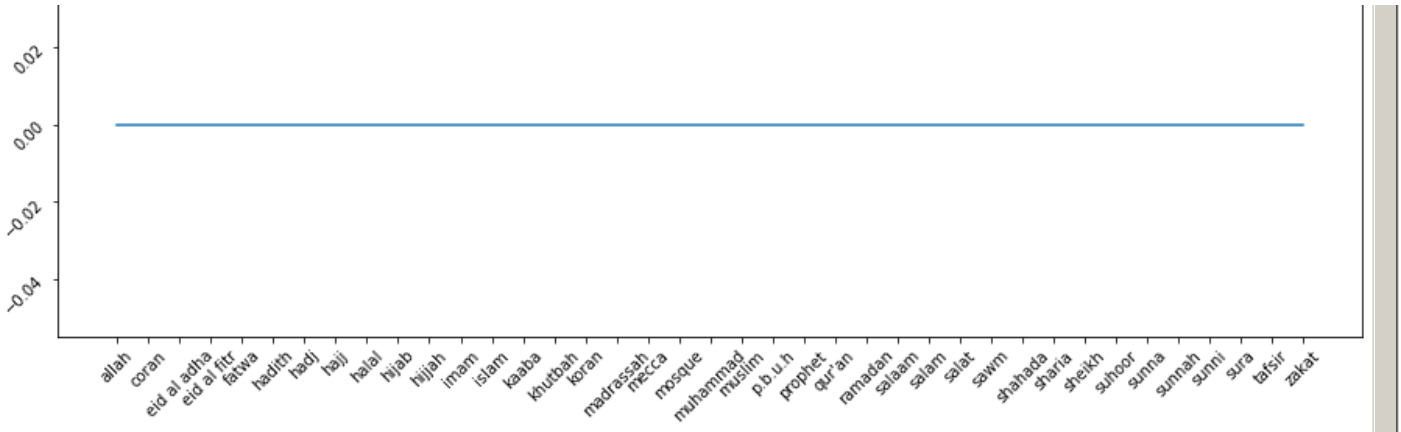
Out[576]:

	Word	FrequencyBudism
0	ajahn chah	0
1	advaita vedanta	0
2	ayya khema	0
3	bhikkhu payutto	0
4	buddha	0
5	buddhism	0
6	buddhist	0
7	chan	0
8	chi kung	0
9	dana	0
10	dharma	0
11	dhamma	0
12	gelugpa	0
13	jhana	0
14	koan	0

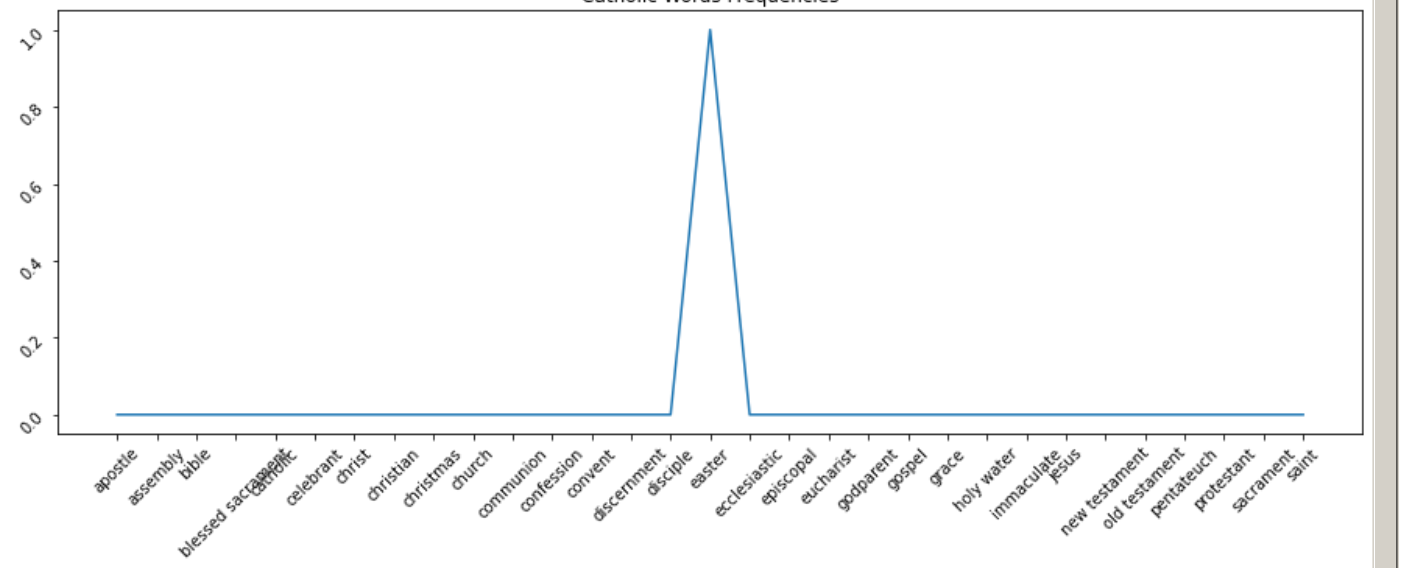




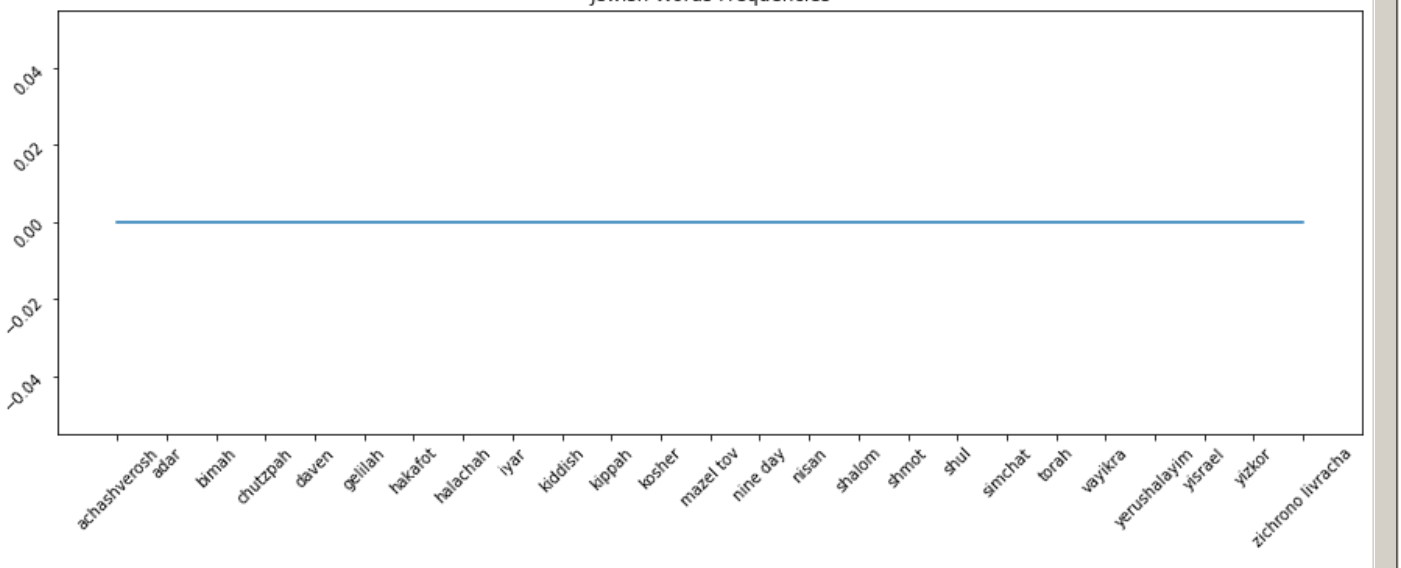




Catholic Words Frequencies



Jewish Words Frequencies



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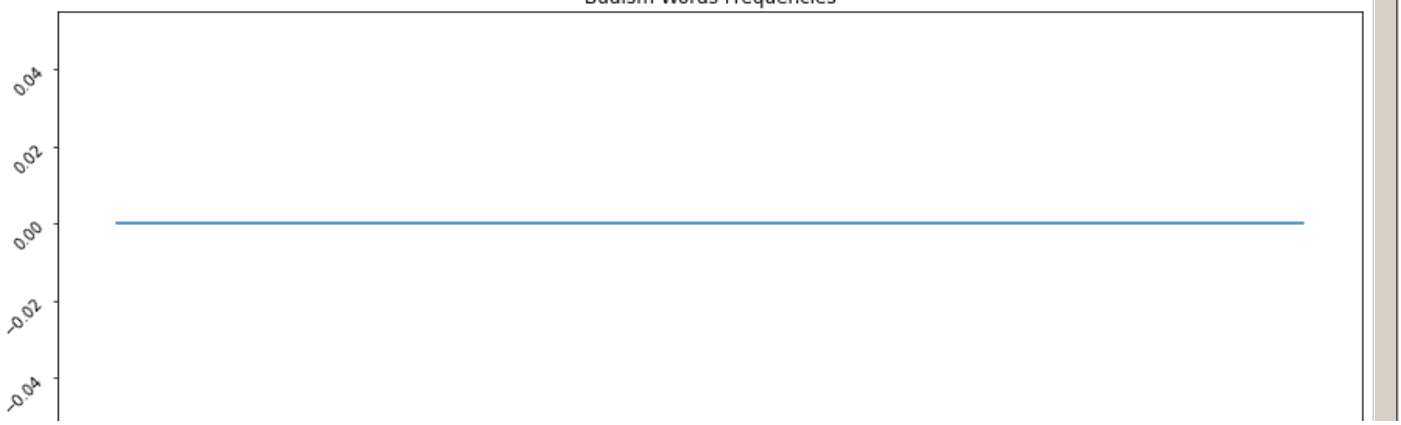

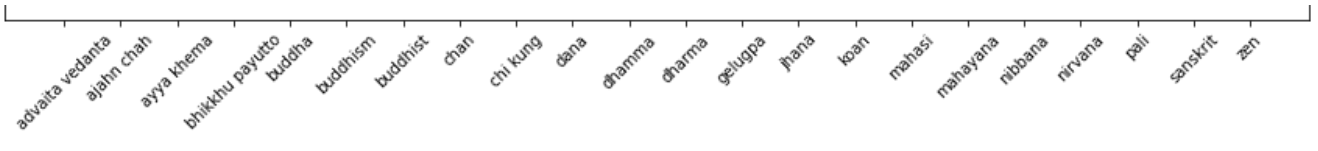

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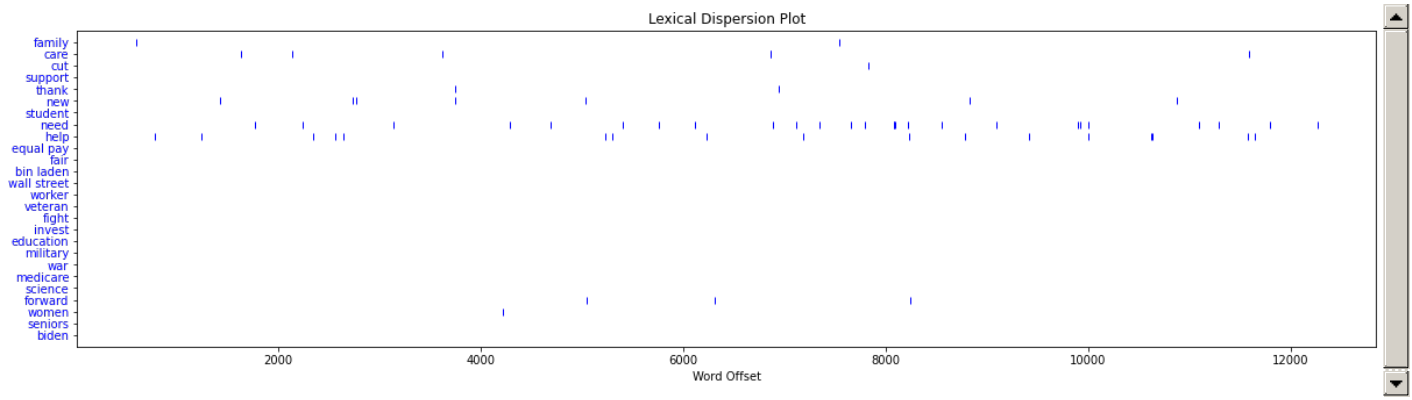

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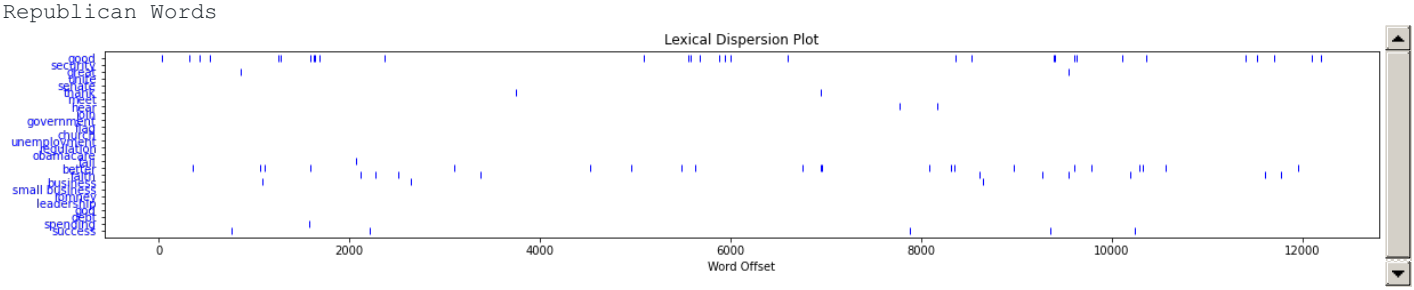

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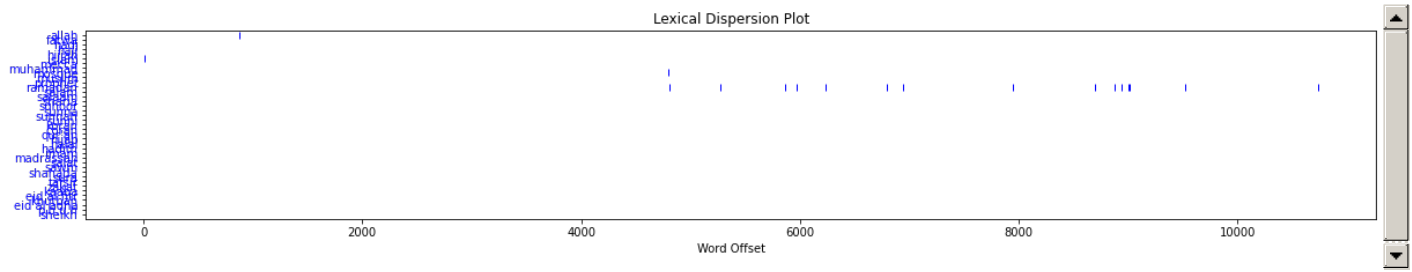

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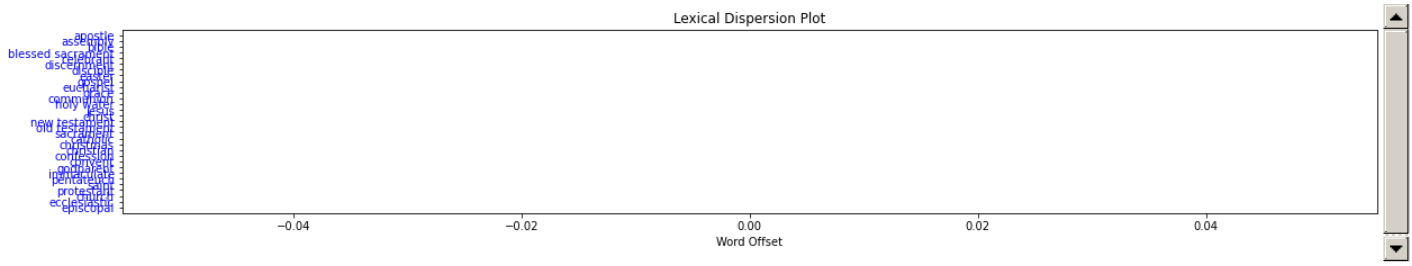

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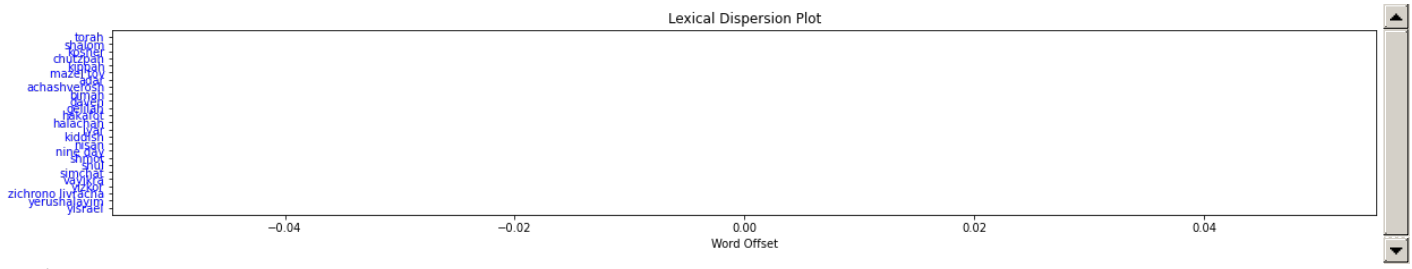
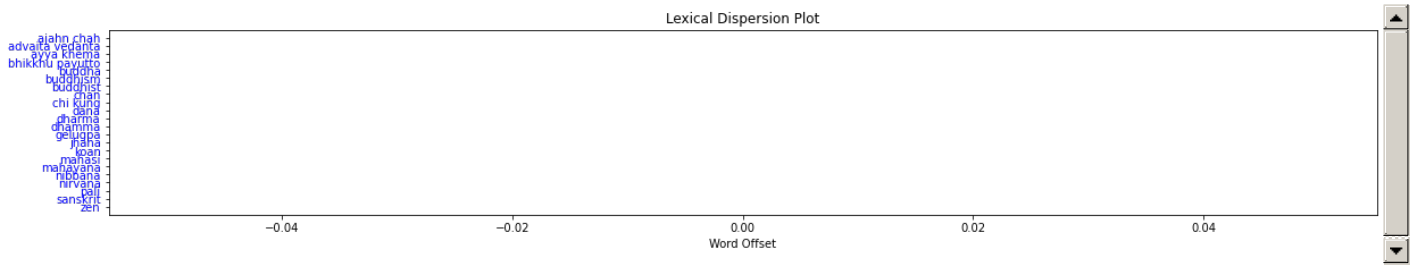
Budism Words