

market-segmentation.rmd

Nemo

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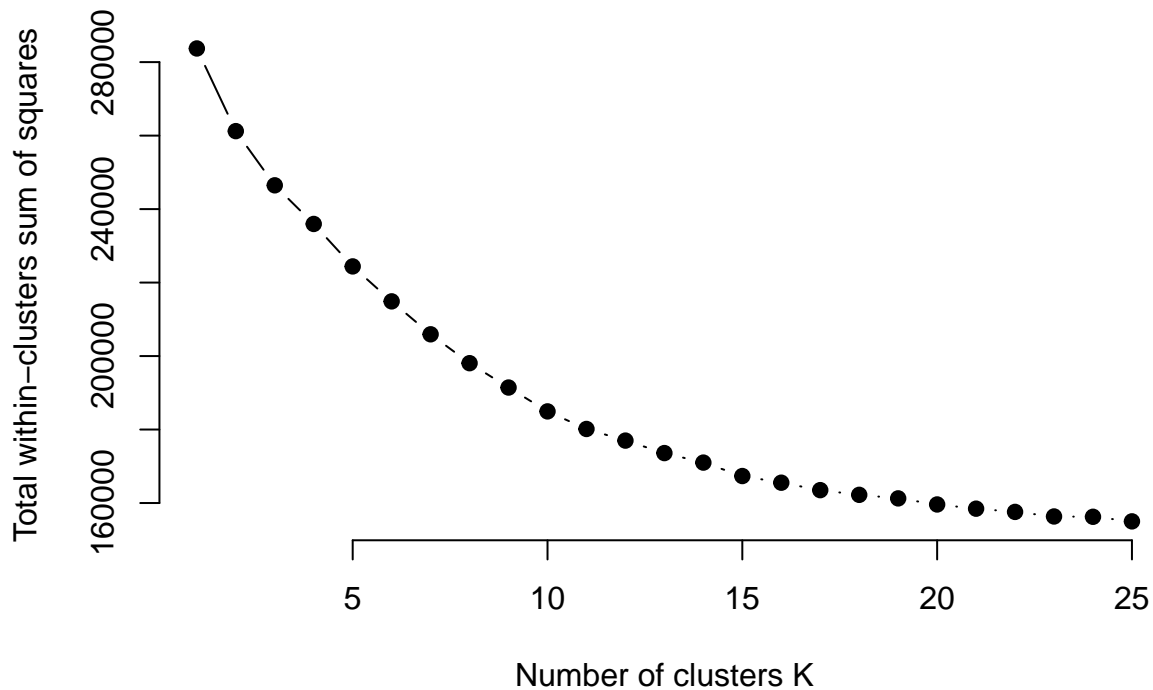
Market Segmentation

Data Pre-Processign

In our Datase, we observe the following:

- X column is essentially the Turk's ID. Thus, this column has been set as the row index and dropped consequently
- Mean-normalised all columns and scaled them to a 0-1 rage (*Performed Z-transformation*) to make the measurements comparable

Elbow method



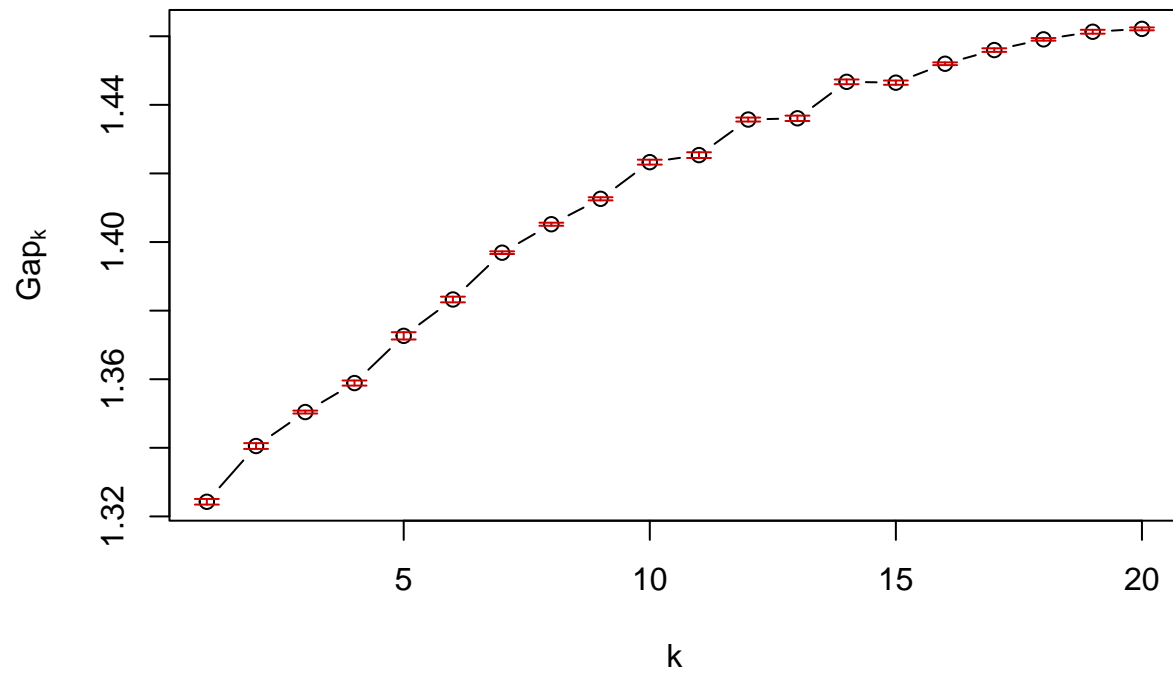
The Elbow Plot above indicates a kink at $K = 14$. This could be a good estimate of the number of clusters

we go choose.

However, This method is too *visual* and the differences are not clearly discernible. Thus, let us re-validate our results with the calculation of the **GAP** metric.

Gap Index

clusGap(x = NutrientH2O, FUNcluster = kmeans, K.max = 20, B = 3, nstart = 5, iter.max = 1000)



##		logW	E.logW	gap	SE.sim
##	[1,]	9.666055	10.99032	1.324268	0.0008224680
##	[2,]	9.611718	10.95224	1.340521	0.0008446234
##	[3,]	9.583689	10.93412	1.350427	0.0004244282
##	[4,]	9.561569	10.92045	1.358884	0.0007422304
##	[5,]	9.538090	10.91074	1.372646	0.0010602093
##	[6,]	9.518623	10.90187	1.383246	0.0008250187
##	[7,]	9.498126	10.89502	1.396896	0.0003843231
##	[8,]	9.482833	10.88803	1.405194	0.0004427242
##	[9,]	9.469945	10.88255	1.412604	0.0004554329
##	[10,]	9.454182	10.87747	1.423289	0.0007160178
##	[11,]	9.447812	10.87315	1.425342	0.0008341239
##	[12,]	9.433375	10.86909	1.435713	0.0005789388
##	[13,]	9.429150	10.86523	1.436080	0.0007802581
##	[14,]	9.414951	10.86167	1.446714	0.0006919865
##	[15,]	9.411458	10.85793	1.446474	0.0006214817
##	[16,]	9.402572	10.85456	1.451986	0.0003996070
##	[17,]	9.395897	10.85187	1.455969	0.0005255290

```
## [18,] 9.389830 10.84893 1.459097 0.0003837243
## [19,] 9.384525 10.84584 1.461313 0.0005703963
## [20,] 9.381393 10.84354 1.462150 0.0004201965
```

```
##
##
## Optimum cluster size is: 14
```

From the above plots and output statistic, we see that the local optima of the Cluster Gap plot is achieved at $K = 14$ clusters. Thus, we go ahead with dividing the consumer base in 14 clusters for targeted marketing.

Running K-Means with 14 clusters

```
##
##
## Metrics for Cluster # 1 :
## chatter
## -----
## Center: -0.0856787635971462
## Standard Deviation: 0.950299468328706
## Lower 95% Confidence Interval: -1.94826572152141
## Upper 95% Confidence Interval: 1.77690819432712
##
## current_events
## -----
## Center: 0.105112451170241
## Standard Deviation: 1.02373768556665
## Lower 95% Confidence Interval: -1.90141341254038
## Upper 95% Confidence Interval: 2.11163831488087
##
## travel
## -----
## Center: 3.30494547068542
## Standard Deviation: 1.84060250124429
## Lower 95% Confidence Interval: -0.302635431753395
## Upper 95% Confidence Interval: 6.91252637312423
##
## photo_sharing
## -----
## Center: -0.108429059037992
## Standard Deviation: 0.944629283441328
## Lower 95% Confidence Interval: -1.959902454583
## Upper 95% Confidence Interval: 1.74304433650701
##
## uncategorized
## -----
## Center: -0.109149846494226
## Standard Deviation: 0.917883243233125
## Lower 95% Confidence Interval: -1.90820100323115
## Upper 95% Confidence Interval: 1.6899013102427
##
## tv_film
## -----
```

```

## Center: -0.0768729964506635
## Standard Deviation: 0.675767663676622
## Lower 95% Confidence Interval: -1.40137761725684
## Upper 95% Confidence Interval: 1.24763162435552
##
## sports_fandom
## -----
## Center: -0.209376529736133
## Standard Deviation: 0.693961470321873
## Lower 95% Confidence Interval: -1.569541011567
## Upper 95% Confidence Interval: 1.15078795209474
##
## politics
## -----
## Center: 3.18302653732473
## Standard Deviation: 1.63138550111293
## Lower 95% Confidence Interval: -0.0144890448566199
## Upper 95% Confidence Interval: 6.38054211950608
##
## food
## -----
## Center: 0.173090064753906
## Standard Deviation: 0.902035525226459
## Lower 95% Confidence Interval: -1.59489956468995
## Upper 95% Confidence Interval: 1.94107969419777
##
## family
## -----
## Center: -0.0712848582339242
## Standard Deviation: 0.849489901520167
## Lower 95% Confidence Interval: -1.73628506521345
## Upper 95% Confidence Interval: 1.5937153487456
##
## home_and_garden
## -----
## Center: 0.061878065004253
## Standard Deviation: 0.999732286314555
## Lower 95% Confidence Interval: -1.89759721617228
## Upper 95% Confidence Interval: 2.02135334618078
##
## music
## -----
## Center: -0.0629227773808865
## Standard Deviation: 0.89715506027145
## Lower 95% Confidence Interval: -1.82134669551293
## Upper 95% Confidence Interval: 1.69550114075116
##
## news
## -----
## Center: 1.15815193429384
## Standard Deviation: 1.113934245213
## Lower 95% Confidence Interval: -1.02515918632364
## Upper 95% Confidence Interval: 3.34146305491132
##

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```

## online_gaming
## -----
## Center: -0.171850542503807
## Standard Deviation: 0.488613005776693
## Lower 95% Confidence Interval: -1.12953203382612
## Upper 95% Confidence Interval: 0.785830948818511
##
## shopping
## -----
## Center: -0.0753829457747883
## Standard Deviation: 0.928039284725199
## Lower 95% Confidence Interval: -1.89433994383618
## Upper 95% Confidence Interval: 1.7435740522866
##
## health_nutrition
## -----
## Center: -0.189134145891097
## Standard Deviation: 0.660980797322261
## Lower 95% Confidence Interval: -1.48465650864273
## Upper 95% Confidence Interval: 1.10638821686053
##
## college_uni
## -----
## Center: -0.0461891765190164
## Standard Deviation: 0.602534809090874
## Lower 95% Confidence Interval: -1.22715740233713
## Upper 95% Confidence Interval: 1.1347790492991
##
## sports_playing
## -----
## Center: 0.0333247659570172
## Standard Deviation: 0.93812057055503
## Lower 95% Confidence Interval: -1.80539155233084
## Upper 95% Confidence Interval: 1.87204108424488
##
## cooking
## -----
## Center: -0.192678079995968
## Standard Deviation: 0.591456090774011
## Lower 95% Confidence Interval: -1.35193201791303
## Upper 95% Confidence Interval: 0.966575857921093
##
## eco
## -----
## Center: 0.148364055709844
## Standard Deviation: 1.03403675836499
## Lower 95% Confidence Interval: -1.87834799068554
## Upper 95% Confidence Interval: 2.17507610210523
##
## computers
## -----
## Center: 2.97898765493966
## Standard Deviation: 1.95240833130881
## Lower 95% Confidence Interval: -0.847732674425605

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## Upper 95% Confidence Interval: 6.80570798430493
##
## business
## -----
## Center: 0.589391769643142
## Standard Deviation: 1.3057778132912
## Lower 95% Confidence Interval: -1.96993274440761
## Upper 95% Confidence Interval: 3.14871628369389
##
## outdoors
## -----
## Center: -0.0544049872450296
## Standard Deviation: 0.844575223563964
## Lower 95% Confidence Interval: -1.7097724254304
## Upper 95% Confidence Interval: 1.60096245094034
##
## crafts
## -----
## Center: 0.194454740975394
## Standard Deviation: 1.07424218600224
## Lower 95% Confidence Interval: -1.911059943589
## Upper 95% Confidence Interval: 2.29996942553979
##
## automotive
## -----
## Center: -0.129012871977337
## Standard Deviation: 0.664967417303514
## Lower 95% Confidence Interval: -1.43234900989222
## Upper 95% Confidence Interval: 1.17432326593755
##
## art
## -----
## Center: -0.178623870615831
## Standard Deviation: 0.591512371875133
## Lower 95% Confidence Interval: -1.33798811949109
## Upper 95% Confidence Interval: 0.98074037825943
##
## religion
## -----
## Center: 0.118486737729706
## Standard Deviation: 0.788478493673263
## Lower 95% Confidence Interval: -1.42693110986989
## Upper 95% Confidence Interval: 1.6639045853293
##
## beauty
## -----
## Center: -0.197589683327811
## Standard Deviation: 0.613825356822568
## Lower 95% Confidence Interval: -1.40068738270004
## Upper 95% Confidence Interval: 1.00550801604442
##
## parenting
## -----
## Center: 0.0101673803249328

```

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## Standard Deviation: 0.782727374379371
## Lower 95% Confidence Interval: -1.52397827345863
## Upper 95% Confidence Interval: 1.5443130341085
##
## dating
## -----
## Center: 0.229821552154655
## Standard Deviation: 0.920612040027702
## Lower 95% Confidence Interval: -1.57457804629964
## Upper 95% Confidence Interval: 2.03422115060895
##
## school
## -----
## Center: -0.108683642038965
## Standard Deviation: 0.843632393152708
## Lower 95% Confidence Interval: -1.76220313261827
## Upper 95% Confidence Interval: 1.54483584854034
##
## personal_fitness
## -----
## Center: -0.17457553596247
## Standard Deviation: 0.678446692077093
## Lower 95% Confidence Interval: -1.50433105243357
## Upper 95% Confidence Interval: 1.15517998050863
##
## fashion
## -----
## Center: -0.179335785171776
## Standard Deviation: 0.694386264776489
## Lower 95% Confidence Interval: -1.5403328641337
## Upper 95% Confidence Interval: 1.18166129379014
##
## small_business
## -----
## Center: 0.391456025577725
## Standard Deviation: 1.3217672369367
## Lower 95% Confidence Interval: -2.19920775881821
## Upper 95% Confidence Interval: 2.98211980997366
##
## spam
## -----
## Center: -0.0776872667656694
## Standard Deviation: 0
## Lower 95% Confidence Interval: -0.0776872667656694
## Upper 95% Confidence Interval: -0.0776872667656694
##
## adult
## -----
## Center: -0.174241626264373
## Standard Deviation: 0.338152484184685
## Lower 95% Confidence Interval: -0.837020495266356
## Upper 95% Confidence Interval: 0.48853724273761
##
##

```

```

## Metrics for Cluster # 2 :
## chatter
## -----
## Center: 0.0617310864082157
## Standard Deviation: 0.95983528874384
## Lower 95% Confidence Interval: -1.81954607952971
## Upper 95% Confidence Interval: 1.94300825234614
##
## current_events
## -----
## Center: 0.10897266387929
## Standard Deviation: 1.06500290038422
## Lower 95% Confidence Interval: -1.97843302087379
## Upper 95% Confidence Interval: 2.19637834863237
##
## travel
## -----
## Center: -0.114774321935532
## Standard Deviation: 0.699043069207483
## Lower 95% Confidence Interval: -1.4848987375822
## Upper 95% Confidence Interval: 1.25535009371114
##
## photo_sharing
## -----
## Center: 0.202241182442683
## Standard Deviation: 0.966064290701937
## Lower 95% Confidence Interval: -1.69124482733311
## Upper 95% Confidence Interval: 2.09572719221848
##
## uncategorized
## -----
## Center: 0.288587369910927
## Standard Deviation: 1.14754509789875
## Lower 95% Confidence Interval: -1.96060102197062
## Upper 95% Confidence Interval: 2.53777576179248
##
## tv_film
## -----
## Center: -0.0423724594114759
## Standard Deviation: 0.827602329029132
## Lower 95% Confidence Interval: -1.66447302430857
## Upper 95% Confidence Interval: 1.57972810548562
##
## sports_fandom
## -----
## Center: -0.0294598171738044
## Standard Deviation: 0.789438444151523
## Lower 95% Confidence Interval: -1.57675916771079
## Upper 95% Confidence Interval: 1.51783953336318
##
## politics
## -----
## Center: -0.097858278389515
## Standard Deviation: 0.700404117629326

```



```

## Lower 95% Confidence Interval: -1.47065034894299
## Upper 95% Confidence Interval: 1.27493379216396
##
## food
## -----
## Center: 0.843161036726358
## Standard Deviation: 1.05535437629024
## Lower 95% Confidence Interval: -1.22533354080251
## Upper 95% Confidence Interval: 2.91165561425523
##
## family
## -----
## Center: 0.0666012967403421
## Standard Deviation: 0.910603892264882
## Lower 95% Confidence Interval: -1.71818233209883
## Upper 95% Confidence Interval: 1.85138492557951
##
## home_and_garden
## -----
## Center: 0.386093612545398
## Standard Deviation: 1.23224824019945
## Lower 95% Confidence Interval: -2.02911293824552
## Upper 95% Confidence Interval: 2.80130016333632
##
## music
## -----
## Center: 0.178007727396013
## Standard Deviation: 0.997099149446671
## Lower 95% Confidence Interval: -1.77630660551946
## Upper 95% Confidence Interval: 2.13232206031149
##
## news
## -----
## Center: 0.119640037225296
## Standard Deviation: 0.921665532776512
## Lower 95% Confidence Interval: -1.68682440701667
## Upper 95% Confidence Interval: 1.92610448146726
##
## online_gaming
## -----
## Center: -0.0444185815610292
## Standard Deviation: 0.594899973357101
## Lower 95% Confidence Interval: -1.21042252934095
## Upper 95% Confidence Interval: 1.12158536621889
##
## shopping
## -----
## Center: 0.256333036906027
## Standard Deviation: 1.02725269959246
## Lower 95% Confidence Interval: -1.7570822542952
## Upper 95% Confidence Interval: 2.26974832810726
##
## health_nutrition
## -----

```

```

## Center: 3.09420506688334
## Standard Deviation: 1.18830149861441
## Lower 95% Confidence Interval: 0.765134129599088
## Upper 95% Confidence Interval: 5.42327600416759
##
## college_uni
## -----
## Center: -0.132317987493033
## Standard Deviation: 0.707639708116139
## Lower 95% Confidence Interval: -1.51929181540067
## Upper 95% Confidence Interval: 1.2546558404146
##
## sports_playing
## -----
## Center: 0.179923696593923
## Standard Deviation: 0.983602723266525
## Lower 95% Confidence Interval: -1.74793764100847
## Upper 95% Confidence Interval: 2.10778503419631
##
## cooking
## -----
## Center: 0.712161208079975
## Standard Deviation: 0.842790509375416
## Lower 95% Confidence Interval: -0.939708190295841
## Upper 95% Confidence Interval: 2.36403060645579
##
## eco
## -----
## Center: 1.0735675333069
## Standard Deviation: 1.57423075321329
## Lower 95% Confidence Interval: -2.01192474299115
## Upper 95% Confidence Interval: 4.15905980960495
##
## computers
## -----
## Center: 0.0483244646798447
## Standard Deviation: 0.824370407556554
## Lower 95% Confidence Interval: -1.567441534131
## Upper 95% Confidence Interval: 1.66409046349069
##
## business
## -----
## Center: 0.219297589733559
## Standard Deviation: 1.17496178216734
## Lower 95% Confidence Interval: -2.08362750331444
## Upper 95% Confidence Interval: 2.52222268278155
##
## outdoors
## -----
## Center: 2.55970944221696
## Standard Deviation: 1.5548439521775
## Lower 95% Confidence Interval: -0.487784704050931
## Upper 95% Confidence Interval: 5.60720358848486
##

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```

## crafts
## -----
## Center: 0.260238999617441
## Standard Deviation: 1.02312144624678
## Lower 95% Confidence Interval: -1.74507903502624
## Upper 95% Confidence Interval: 2.26555703426112
##
## automotive
## -----
## Center: -0.0929546741096116
## Standard Deviation: 0.802883060999237
## Lower 95% Confidence Interval: -1.66660547366812
## Upper 95% Confidence Interval: 1.48069612544889
##
## art
## -----
## Center: -0.00366119643211691
## Standard Deviation: 0.680133640069837
## Lower 95% Confidence Interval: -1.336723130969
## Upper 95% Confidence Interval: 1.32940073810476
##
## religion
## -----
## Center: 0.0402734055541433
## Standard Deviation: 0.856232480506797
## Lower 95% Confidence Interval: -1.63794225623918
## Upper 95% Confidence Interval: 1.71848906734747
##
## beauty
## -----
## Center: -0.0811105209905799
## Standard Deviation: 0.78297950891196
## Lower 95% Confidence Interval: -1.61575035845802
## Upper 95% Confidence Interval: 1.45352931647686
##
## parenting
## -----
## Center: 0.138350529036353
## Standard Deviation: 0.86947764055989
## Lower 95% Confidence Interval: -1.56582564646103
## Upper 95% Confidence Interval: 1.84252670453374
##
## dating
## -----
## Center: 0.207037142253786
## Standard Deviation: 0.766948011560341
## Lower 95% Confidence Interval: -1.29618096040448
## Upper 95% Confidence Interval: 1.71025524491205
##
## school
## -----
## Center: -0.0411094765284404
## Standard Deviation: 0.810316718821635
## Lower 95% Confidence Interval: -1.62933024541884

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```

## Upper 95% Confidence Interval: 1.54711129236196
##
## personal_fitness
## -----
## Center: 3.01706764367874
## Standard Deviation: 1.19539377739179
## Lower 95% Confidence Interval: 0.674095839990839
## Upper 95% Confidence Interval: 5.36003944736665
##
## fashion
## -----
## Center: 0.0280838442101977
## Standard Deviation: 0.763661194627043
## Lower 95% Confidence Interval: -1.46869209725881
## Upper 95% Confidence Interval: 1.5248597856792
##
## small_business
## -----
## Center: -0.0427597475223894
## Standard Deviation: 0.920155446721491
## Lower 95% Confidence Interval: -1.84626442309651
## Upper 95% Confidence Interval: 1.76074492805173
##
## spam
## -----
## Center: -0.0776872667656694
## Standard Deviation: 0
## Lower 95% Confidence Interval: -0.0776872667656694
## Upper 95% Confidence Interval: -0.0776872667656694
##
## adult
## -----
## Center: -0.0761807559088682
## Standard Deviation: 0.772946160715305
## Lower 95% Confidence Interval: -1.59115523091086
## Upper 95% Confidence Interval: 1.43879371909313
##
## Metrics for Cluster # 3 :
## chatter
## -----
## Center: 1.5544402151955
## Standard Deviation: 1.04307202510135
## Lower 95% Confidence Interval: -0.489980954003154
## Upper 95% Confidence Interval: 3.59886138439416
##
## current_events
## -----
## Center: 0.39946749679555
## Standard Deviation: 1.04748851906202
## Lower 95% Confidence Interval: -1.65361000056601
## Upper 95% Confidence Interval: 2.45254499415711
##
## travel

```

```

## -----
## Center: -0.213456420628975
## Standard Deviation: 0.527992537346917
## Lower 95% Confidence Interval: -1.24832179382893
## Upper 95% Confidence Interval: 0.821408952570982
##
## photo_sharing
## -----
## Center: 1.2457033347015
## Standard Deviation: 1.12848114046079
## Lower 95% Confidence Interval: -0.966119700601645
## Upper 95% Confidence Interval: 3.45752637000465
##
## uncategorized
## -----
## Center: -0.0199880799310152
## Standard Deviation: 0.927832886997975
## Lower 95% Confidence Interval: -1.83854053844705
## Upper 95% Confidence Interval: 1.79856437858502
##
## tv_film
## -----
## Center: -0.176033246757042
## Standard Deviation: 0.643225744958993
## Lower 95% Confidence Interval: -1.43675570687667
## Upper 95% Confidence Interval: 1.08468921336258
##
## sports_fandom
## -----
## Center: -0.187095243817613
## Standard Deviation: 0.616372171826707
## Lower 95% Confidence Interval: -1.39518470059796
## Upper 95% Confidence Interval: 1.02099421296273
##
## politics
## -----
## Center: -0.132738881106033
## Standard Deviation: 0.52525674162372
## Lower 95% Confidence Interval: -1.16224209468852
## Upper 95% Confidence Interval: 0.896764332476458
##
## food
## -----
## Center: -0.32234672833306
## Standard Deviation: 0.609098431075648
## Lower 95% Confidence Interval: -1.51617965324133
## Upper 95% Confidence Interval: 0.871486196575209
##
## family
## -----
## Center: -0.0241007685368346
## Standard Deviation: 0.810050321709848
## Lower 95% Confidence Interval: -1.61179939908814
## Upper 95% Confidence Interval: 1.56359786201447

```

```

##
## home_and_garden
## -----
## Center: 0.053373742277748
## Standard Deviation: 1.00553768686755
## Lower 95% Confidence Interval: -1.91748012398262
## Upper 95% Confidence Interval: 2.02422760853817
##
## music
## -----
## Center: 0.0683922863797202
## Standard Deviation: 0.871455003410237
## Lower 95% Confidence Interval: -1.63965952030434
## Upper 95% Confidence Interval: 1.77644409306378
##
## news
## -----
## Center: -0.270832792757263
## Standard Deviation: 0.547075695574191
## Lower 95% Confidence Interval: -1.34310115608268
## Upper 95% Confidence Interval: 0.801435570568151
##
## online_gaming
## -----
## Center: -0.169560315224953
## Standard Deviation: 0.479387968341626
## Lower 95% Confidence Interval: -1.10916073317454
## Upper 95% Confidence Interval: 0.770040102724635
##
## shopping
## -----
## Center: 1.57088503812276
## Standard Deviation: 1.24371019225119
## Lower 95% Confidence Interval: -0.866786938689573
## Upper 95% Confidence Interval: 4.0085570149351
##
## health_nutrition
## -----
## Center: -0.242070690928909
## Standard Deviation: 0.590003114277732
## Lower 95% Confidence Interval: -1.39847679491326
## Upper 95% Confidence Interval: 0.914335413055447
##
## college_uni
## -----
## Center: -0.141141389023255
## Standard Deviation: 0.551805476449819
## Lower 95% Confidence Interval: -1.2226801228649
## Upper 95% Confidence Interval: 0.94039734481839
##
## sports_playing
## -----
## Center: -0.09873814374558
## Standard Deviation: 0.802129224620844

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## Lower 95% Confidence Interval: -1.67091142400243
## Upper 95% Confidence Interval: 1.47343513651127
##
## cooking
## -----
## Center: -0.228057523977188
## Standard Deviation: 0.531275190182149
## Lower 95% Confidence Interval: -1.2693568967342
## Upper 95% Confidence Interval: 0.813241848779824
##
## eco
## -----
## Center: 0.289130092431323
## Standard Deviation: 1.09288384081545
## Lower 95% Confidence Interval: -1.85292223556696
## Upper 95% Confidence Interval: 2.4311824204296
##
## computers
## -----
## Center: -0.0396693329022701
## Standard Deviation: 0.680843462649943
## Lower 95% Confidence Interval: -1.37412251969616
## Upper 95% Confidence Interval: 1.29478385389162
##
## business
## -----
## Center: 0.309760205954512
## Standard Deviation: 1.15419181084934
## Lower 95% Confidence Interval: -1.95245574331019
## Upper 95% Confidence Interval: 2.57197615521921
##
## outdoors
## -----
## Center: -0.291823124416676
## Standard Deviation: 0.585589658565088
## Lower 95% Confidence Interval: -1.43957885520425
## Upper 95% Confidence Interval: 0.855932606370898
##
## crafts
## -----
## Center: 0.00926690971612227
## Standard Deviation: 0.928050856887401
## Lower 95% Confidence Interval: -1.80971276978318
## Upper 95% Confidence Interval: 1.82824658921543
##
## automotive
## -----
## Center: 0.113660456016986
## Standard Deviation: 0.790299164175294
## Lower 95% Confidence Interval: -1.43532590576659
## Upper 95% Confidence Interval: 1.66264681780056
##
## art
## -----

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## Center: -0.209144050534351
## Standard Deviation: 0.475597432767907
## Lower 95% Confidence Interval: -1.14131501875945
## Upper 95% Confidence Interval: 0.723026917690747
##
## religion
## -----
## Center: -0.277820395171461
## Standard Deviation: 0.524989977034664
## Lower 95% Confidence Interval: -1.3068007501594
## Upper 95% Confidence Interval: 0.75115995981648
##
## beauty
## -----
## Center: -0.237545016549239
## Standard Deviation: 0.553475518770021
## Lower 95% Confidence Interval: -1.32235703333848
## Upper 95% Confidence Interval: 0.847267000240002
##
## parenting
## -----
## Center: -0.215826183326206
## Standard Deviation: 0.623002301467384
## Lower 95% Confidence Interval: -1.43691069420228
## Upper 95% Confidence Interval: 1.00525832754987
##
## dating
## -----
## Center: -0.151968273898352
## Standard Deviation: 0.518903602121288
## Lower 95% Confidence Interval: -1.16901933405608
## Upper 95% Confidence Interval: 0.865082786259372
##
## school
## -----
## Center: -0.0324472107984548
## Standard Deviation: 0.760009524933176
## Lower 95% Confidence Interval: -1.52206587966748
## Upper 95% Confidence Interval: 1.45717145807057
##
## personal_fitness
## -----
## Center: -0.18925659504706
## Standard Deviation: 0.601268317812233
## Lower 95% Confidence Interval: -1.36774249795904
## Upper 95% Confidence Interval: 0.989229307864916
##
## fashion
## -----
## Center: -0.156265254752845
## Standard Deviation: 0.586143368469875
## Lower 95% Confidence Interval: -1.3051062569538
## Upper 95% Confidence Interval: 0.992575747448111
##

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## small_business
## -----
## Center: 0.115933694478626
## Standard Deviation: 1.05732191008692
## Lower 95% Confidence Interval: -1.95641724929173
## Upper 95% Confidence Interval: 2.18828463824898
##
## spam
## -----
## Center: -0.0776872667656702
## Standard Deviation: 0
## Lower 95% Confidence Interval: -0.0776872667656702
## Upper 95% Confidence Interval: -0.0776872667656702
##
## adult
## -----
## Center: -0.157497157073368
## Standard Deviation: 0.371596049985698
## Lower 95% Confidence Interval: -0.885825415045338
## Upper 95% Confidence Interval: 0.5708311008986
##
## Metrics for Cluster # 4 :
## chatter
## -----
## Center: -0.0824749202707541
## Standard Deviation: 0.875054329551099
## Lower 95% Confidence Interval: -1.79758140619091
## Upper 95% Confidence Interval: 1.6326315656494
##
## current_events
## -----
## Center: 0.156839668166279
## Standard Deviation: 1.03342444178687
## Lower 95% Confidence Interval: -1.86867223773599
## Upper 95% Confidence Interval: 2.18235157406855
##
## travel
## -----
## Center: -0.0578669199698447
## Standard Deviation: 0.770178236459257
## Lower 95% Confidence Interval: -1.56741626342999
## Upper 95% Confidence Interval: 1.4516824234903
##
## photo_sharing
## -----
## Center: 1.23022262460536
## Standard Deviation: 1.17170901596623
## Lower 95% Confidence Interval: -1.06632704668844
## Upper 95% Confidence Interval: 3.52677229589916
##
## uncategorized
## -----
## Center: 0.465201099008

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## Standard Deviation: 1.17923889782329
## Lower 95% Confidence Interval: -1.84610714072564
## Upper 95% Confidence Interval: 2.77650933874164
##
## tv_film
## -----
## Center: -0.135118842383221
## Standard Deviation: 0.75560956531465
## Lower 95% Confidence Interval: -1.61611359039993
## Upper 95% Confidence Interval: 1.34587590563349
##
## sports_fandom
## -----
## Center: -0.222001051856974
## Standard Deviation: 0.687511759792885
## Lower 95% Confidence Interval: -1.56952410105103
## Upper 95% Confidence Interval: 1.12552199733708
##
## politics
## -----
## Center: -0.138365508132058
## Standard Deviation: 0.741266320519732
## Lower 95% Confidence Interval: -1.59124749635073
## Upper 95% Confidence Interval: 1.31451648008662
##
## food
## -----
## Center: -0.217677533639072
## Standard Deviation: 0.683648086468454
## Lower 95% Confidence Interval: -1.55762778311724
## Upper 95% Confidence Interval: 1.1222727158391
##
## family
## -----
## Center: 0.0328740221104222
## Standard Deviation: 0.943637619280458
## Lower 95% Confidence Interval: -1.81665571167927
## Upper 95% Confidence Interval: 1.88240375590012
##
## home_and_garden
## -----
## Center: 0.107670571992982
## Standard Deviation: 1.05299643894814
## Lower 95% Confidence Interval: -1.95620244834537
## Upper 95% Confidence Interval: 2.17154359233133
##
## music
## -----
## Center: 0.537562985882776
## Standard Deviation: 1.15926645874112
## Lower 95% Confidence Interval: -1.73459927324981
## Upper 95% Confidence Interval: 2.80972524501537
##
## news

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## -----
## Center: -0.0988820226914899
## Standard Deviation: 0.789536659509848
## Lower 95% Confidence Interval: -1.64637387533079
## Upper 95% Confidence Interval: 1.44860982994781
##
## online_gaming
## -----
## Center: -0.024548452420945
## Standard Deviation: 0.778585405362911
## Lower 95% Confidence Interval: -1.55057584693225
## Upper 95% Confidence Interval: 1.50147894209036
##
## shopping
## -----
## Center: 0.20028249547291
## Standard Deviation: 0.905859831770098
## Lower 95% Confidence Interval: -1.57520277479648
## Upper 95% Confidence Interval: 1.9757677657423
##
## health_nutrition
## -----
## Center: -0.0772799092776352
## Standard Deviation: 0.753878871926835
## Lower 95% Confidence Interval: -1.55488249825423
## Upper 95% Confidence Interval: 1.40032267969896
##
## college_uni
## -----
## Center: -0.0235269289389964
## Standard Deviation: 0.741926454665969
## Lower 95% Confidence Interval: -1.4777027800843
## Upper 95% Confidence Interval: 1.4306489222063
##
## sports_playing
## -----
## Center: 0.173870211866808
## Standard Deviation: 0.99805770580583
## Lower 95% Confidence Interval: -1.78232289151262
## Upper 95% Confidence Interval: 2.13006331524623
##
## cooking
## -----
## Center: 2.85258388308826
## Standard Deviation: 1.51848588576406
## Lower 95% Confidence Interval: -0.123648453009289
## Upper 95% Confidence Interval: 5.82881621918581
##
## eco
## -----
## Center: -0.00599462703972066
## Standard Deviation: 1.05559335591283
## Lower 95% Confidence Interval: -2.07495760462888
## Upper 95% Confidence Interval: 2.06296835054943

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##
## computers
## -----
## Center: 0.0534265103866062
## Standard Deviation: 0.880180257914814
## Lower 95% Confidence Interval: -1.67172679512643
## Upper 95% Confidence Interval: 1.77857981589964
##
## business
## -----
## Center: 0.217198307938133
## Standard Deviation: 1.1687284517969
## Lower 95% Confidence Interval: -2.07350945758379
## Upper 95% Confidence Interval: 2.50790607346006
##
## outdoors
## -----
## Center: 0.0288660910070699
## Standard Deviation: 0.914860304762532
## Lower 95% Confidence Interval: -1.76426010632749
## Upper 95% Confidence Interval: 1.82199228834163
##
## crafts
## -----
## Center: 0.0761011770115377
## Standard Deviation: 0.956214770152834
## Lower 95% Confidence Interval: -1.79807977248802
## Upper 95% Confidence Interval: 1.95028212651109
##
## automotive
## -----
## Center: -0.000947250952183148
## Standard Deviation: 0.890965809278379
## Lower 95% Confidence Interval: -1.74724023713781
## Upper 95% Confidence Interval: 1.74534573523344
##
## art
## -----
## Center: 0.0232093108561775
## Standard Deviation: 0.703320992724851
## Lower 95% Confidence Interval: -1.35529983488453
## Upper 95% Confidence Interval: 1.40171845659689
##
## religion
## -----
## Center: -0.129022249747539
## Standard Deviation: 0.647793289254606
## Lower 95% Confidence Interval: -1.39869709668657
## Upper 95% Confidence Interval: 1.14065259719149
##
## beauty
## -----
## Center: 2.6715782899606
## Standard Deviation: 1.69202528516353

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## Lower 95% Confidence Interval: -0.644791268959926
## Upper 95% Confidence Interval: 5.98794784888112
##
## parenting
## -----
## Center: -0.0728215458889261
## Standard Deviation: 0.715523016982435
## Lower 95% Confidence Interval: -1.4752466591745
## Upper 95% Confidence Interval: 1.32960356739665
##
## dating
## -----
## Center: -0.0523342387272193
## Standard Deviation: 0.699384210117342
## Lower 95% Confidence Interval: -1.42312729055721
## Upper 95% Confidence Interval: 1.31845881310277
##
## school
## -----
## Center: 0.130761344245855
## Standard Deviation: 0.832535587185841
## Lower 95% Confidence Interval: -1.50100840663839
## Upper 95% Confidence Interval: 1.7625310951301
##
## personal_fitness
## -----
## Center: -0.0596131355164215
## Standard Deviation: 0.74321652897479
## Lower 95% Confidence Interval: -1.51631753230701
## Upper 95% Confidence Interval: 1.39709126127417
##
## fashion
## -----
## Center: 2.76894105811355
## Standard Deviation: 1.63380551596191
## Lower 95% Confidence Interval: -0.433317753171794
## Upper 95% Confidence Interval: 5.97119986939889
##
## small_business
## -----
## Center: 0.152768359003693
## Standard Deviation: 1.09386045371918
## Lower 95% Confidence Interval: -1.99119813028589
## Upper 95% Confidence Interval: 2.29673484829328
##
## spam
## -----
## Center: -0.0776872667656694
## Standard Deviation: 0
## Lower 95% Confidence Interval: -0.0776872667656694
## Upper 95% Confidence Interval: -0.0776872667656694
##
## adult
## -----

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## Center: -0.114545293064634
## Standard Deviation: 0.527600196962503
## Lower 95% Confidence Interval: -1.14864167911114
## Upper 95% Confidence Interval: 0.919551092981871
##
##
## Metrics for Cluster # 5 :
## chatter
## -----
## Center: 1.01891973996368
## Standard Deviation: 0.991854721722572
## Lower 95% Confidence Interval: -0.925115514612559
## Upper 95% Confidence Interval: 2.96295499453992
##
## current_events
## -----
## Center: 0.0783409475103553
## Standard Deviation: 1.05258092162802
## Lower 95% Confidence Interval: -1.98471765888057
## Upper 95% Confidence Interval: 2.14139955390128
##
## travel
## -----
## Center: -0.0477210977426128
## Standard Deviation: 0.657980256146985
## Lower 95% Confidence Interval: -1.3373623997907
## Upper 95% Confidence Interval: 1.24192020430548
##
## photo_sharing
## -----
## Center: -0.02015963254585
## Standard Deviation: 0.98373444056512
## Lower 95% Confidence Interval: -1.94827913605349
## Upper 95% Confidence Interval: 1.90795987096179
##
## uncategorized
## -----
## Center: 0.736955364479043
## Standard Deviation: 1.08209767795921
## Lower 95% Confidence Interval: -1.38395608432101
## Upper 95% Confidence Interval: 2.85786681327909
##
## tv_film
## -----
## Center: -0.110072359281225
## Standard Deviation: 0.713634479886559
## Lower 95% Confidence Interval: -1.50879593985888
## Upper 95% Confidence Interval: 1.28865122129643
##
## sports_fandom
## -----
## Center: -0.126407443711592
## Standard Deviation: 0.812058625040215
## Lower 95% Confidence Interval: -1.71804234879041

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## Upper 95% Confidence Interval: 1.46522746136723
##
## politics
## -----
## Center: -0.147268104507101
## Standard Deviation: 0.680816874722706
## Lower 95% Confidence Interval: -1.4816691789636
## Upper 95% Confidence Interval: 1.1871329699494
##
## food
## -----
## Center: -0.133513088146202
## Standard Deviation: 0.765022753243127
## Lower 95% Confidence Interval: -1.63295768450273
## Upper 95% Confidence Interval: 1.36593150821033
##
## family
## -----
## Center: -0.0828330615781271
## Standard Deviation: 0.831900382943643
## Lower 95% Confidence Interval: -1.71335781214767
## Upper 95% Confidence Interval: 1.54769168899141
##
## home_and_garden
## -----
## Center: 0.585308459059906
## Standard Deviation: 1.37398401819081
## Lower 95% Confidence Interval: -2.10770021659409
## Upper 95% Confidence Interval: 3.2783171347139
##
## music
## -----
## Center: -0.119531770525008
## Standard Deviation: 0.712439784398239
## Lower 95% Confidence Interval: -1.51591374794556
## Upper 95% Confidence Interval: 1.27685020689554
##
## news
## -----
## Center: -0.125836640706753
## Standard Deviation: 0.768146202226605
## Lower 95% Confidence Interval: -1.6314031970709
## Upper 95% Confidence Interval: 1.37972991565739
##
## online_gaming
## -----
## Center: -0.0657663239426201
## Standard Deviation: 0.577359622596235
## Lower 95% Confidence Interval: -1.19739118423124
## Upper 95% Confidence Interval: 1.065858536346
##
## shopping
## -----
## Center: -0.0851781033034957

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## Standard Deviation: 0.938169522114273
## Lower 95% Confidence Interval: -1.92399036664747
## Upper 95% Confidence Interval: 1.75363416004048
##
## health_nutrition
## -----
## Center: -0.0857231527177214
## Standard Deviation: 0.775246955320325
## Lower 95% Confidence Interval: -1.60520718514556
## Upper 95% Confidence Interval: 1.43376087971012
##
## college_uni
## -----
## Center: -0.0641468962140864
## Standard Deviation: 0.727941095108794
## Lower 95% Confidence Interval: -1.49091144262732
## Upper 95% Confidence Interval: 1.36261765019915
##
## sports_playing
## -----
## Center: 0.326023432489465
## Standard Deviation: 0.937765167463678
## Lower 95% Confidence Interval: -1.51199629573934
## Upper 95% Confidence Interval: 2.16404316071827
##
## cooking
## -----
## Center: -0.13668225394991
## Standard Deviation: 0.709201000389652
## Lower 95% Confidence Interval: -1.52671621471363
## Upper 95% Confidence Interval: 1.25335170681381
##
## eco
## -----
## Center: 0.126433679816353
## Standard Deviation: 0.95498559153276
## Lower 95% Confidence Interval: -1.74533807958786
## Upper 95% Confidence Interval: 1.99820543922056
##
## computers
## -----
## Center: 0.0164274067045588
## Standard Deviation: 0.933430487442079
## Lower 95% Confidence Interval: -1.81309634868192
## Upper 95% Confidence Interval: 1.84595116209103
##
## business
## -----
## Center: 0.431385574424835
## Standard Deviation: 1.40309745091015
## Lower 95% Confidence Interval: -2.31868542935906
## Upper 95% Confidence Interval: 3.18145657820873
##
## outdoors

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## -----
## Center: 0.0647327809693345
## Standard Deviation: 0.98946101943039
## Lower 95% Confidence Interval: -1.87461081711423
## Upper 95% Confidence Interval: 2.0040763790529
##
## crafts
## -----
## Center: 0.422482326716134
## Standard Deviation: 1.22548509766719
## Lower 95% Confidence Interval: -1.97946846471155
## Upper 95% Confidence Interval: 2.82443311814382
##
## automotive
## -----
## Center: -0.180783693442547
## Standard Deviation: 0.754206318682734
## Lower 95% Confidence Interval: -1.65902807806071
## Upper 95% Confidence Interval: 1.29746069117561
##
## art
## -----
## Center: -0.0116187821423761
## Standard Deviation: 0.718271747815111
## Lower 95% Confidence Interval: -1.41943140785999
## Upper 95% Confidence Interval: 1.39619384357524
##
## religion
## -----
## Center: 0.0590908450485917
## Standard Deviation: 0.903626362667071
## Lower 95% Confidence Interval: -1.71201682577887
## Upper 95% Confidence Interval: 1.83019851587605
##
## beauty
## -----
## Center: 0.278420479947563
## Standard Deviation: 0.871234251897321
## Lower 95% Confidence Interval: -1.42919865377119
## Upper 95% Confidence Interval: 1.98603961366631
##
## parenting
## -----
## Center: 0.115429398339771
## Standard Deviation: 0.871324171336589
## Lower 95% Confidence Interval: -1.59236597747994
## Upper 95% Confidence Interval: 1.82322477415949
##
## dating
## -----
## Center: 4.90271421529722
## Standard Deviation: 1.88174112049869
## Lower 95% Confidence Interval: 1.2145016191198
## Upper 95% Confidence Interval: 8.59092681147465

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##
## school
## -----
## Center: 1.30258572930136
## Standard Deviation: 1.423787779963
## Lower 95% Confidence Interval: -1.48803831942612
## Upper 95% Confidence Interval: 4.09320977802885
##
## personal_fitness
## -----
## Center: -0.0587091539935419
## Standard Deviation: 0.851804599909573
## Lower 95% Confidence Interval: -1.7282461698163
## Upper 95% Confidence Interval: 1.61082786182922
##
## fashion
## -----
## Center: 0.826644421586861
## Standard Deviation: 1.00234751614488
## Lower 95% Confidence Interval: -1.13795671005711
## Upper 95% Confidence Interval: 2.79124555323083
##
## small_business
## -----
## Center: 0.36425225093292
## Standard Deviation: 1.25557837567848
## Lower 95% Confidence Interval: -2.09668136539691
## Upper 95% Confidence Interval: 2.82518586726275
##
## spam
## -----
## Center: -0.07768726676567
## Standard Deviation: 0
## Lower 95% Confidence Interval: -0.07768726676567
## Upper 95% Confidence Interval: -0.07768726676567
##
## adult
## -----
## Center: -0.0838120602557893
## Standard Deviation: 0.68521323221877
## Lower 95% Confidence Interval: -1.42682999540458
## Upper 95% Confidence Interval: 1.259205874893
##
## Metrics for Cluster # 6 :
## chatter
## -----
## Center: -0.152404438101297
## Standard Deviation: 0.825265970745249
## Lower 95% Confidence Interval: -1.76992574076199
## Upper 95% Confidence Interval: 1.46511686455939
##
## current_events
## -----

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## Center: 0.20150874299132
## Standard Deviation: 1.0532844704962
## Lower 95% Confidence Interval: -1.86292881918123
## Upper 95% Confidence Interval: 2.26594630516387
##
## travel
## -----
## Center: -0.00264990571601851
## Standard Deviation: 0.607482221470131
## Lower 95% Confidence Interval: -1.19331505979748
## Upper 95% Confidence Interval: 1.18801524836544
##
## photo_sharing
## -----
## Center: -0.132597355586699
## Standard Deviation: 0.79231698832514
## Lower 95% Confidence Interval: -1.68553865270397
## Upper 95% Confidence Interval: 1.42034394153057
##
## uncategorized
## -----
## Center: 0.914866924906032
## Standard Deviation: 1.43042301457594
## Lower 95% Confidence Interval: -1.88876218366281
## Upper 95% Confidence Interval: 3.71849603347487
##
## tv_film
## -----
## Center: 2.1287994457203
## Standard Deviation: 1.4158764184707
## Lower 95% Confidence Interval: -0.64631833448227
## Upper 95% Confidence Interval: 4.90391722592287
##
## sports_fandom
## -----
## Center: -0.0435054425647992
## Standard Deviation: 0.635976279043902
## Lower 95% Confidence Interval: -1.29001894949085
## Upper 95% Confidence Interval: 1.20300806436125
##
## politics
## -----
## Center: -0.246536115194367
## Standard Deviation: 0.494990099326901
## Lower 95% Confidence Interval: -1.21671670987509
## Upper 95% Confidence Interval: 0.723644479486359
##
## food
## -----
## Center: -0.0375436372286327
## Standard Deviation: 0.774305497634049
## Lower 95% Confidence Interval: -1.55518241259137
## Upper 95% Confidence Interval: 1.4800951381341
##

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## family
## -----
## Center: -0.132073430376527
## Standard Deviation: 0.782789314151938
## Lower 95% Confidence Interval: -1.66634048611433
## Upper 95% Confidence Interval: 1.40219362536127
##
## home_and_garden
## -----
## Center: 0.216876601683341
## Standard Deviation: 1.14890340077296
## Lower 95% Confidence Interval: -2.03497406383167
## Upper 95% Confidence Interval: 2.46872726719835
##
## music
## -----
## Center: 2.58524065441704
## Standard Deviation: 1.95438062683793
## Lower 95% Confidence Interval: -1.24534537418531
## Upper 95% Confidence Interval: 6.41582668301939
##
## news
## -----
## Center: -0.151521586736678
## Standard Deviation: 0.596849324675402
## Lower 95% Confidence Interval: -1.32134626310047
## Upper 95% Confidence Interval: 1.01830308962711
##
## online_gaming
## -----
## Center: -0.0958905287734341
## Standard Deviation: 0.662625521892953
## Lower 95% Confidence Interval: -1.39463655168362
## Upper 95% Confidence Interval: 1.20285549413675
##
## shopping
## -----
## Center: -0.0988707024594156
## Standard Deviation: 0.89607793954358
## Lower 95% Confidence Interval: -1.85518346396483
## Upper 95% Confidence Interval: 1.657442059046
##
## health_nutrition
## -----
## Center: -0.239040525461843
## Standard Deviation: 0.645551844398253
## Lower 95% Confidence Interval: -1.50432214048242
## Upper 95% Confidence Interval: 1.02624108955873
##
## college_uni
## -----
## Center: 1.15466990400953
## Standard Deviation: 0.94231207409599
## Lower 95% Confidence Interval: -0.692261761218613

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## Upper 95% Confidence Interval: 3.00160156923767
##
## sports_playing
## -----
## Center: 0.427684124519403
## Standard Deviation: 1.14765693237874
## Lower 95% Confidence Interval: -1.82172346294293
## Upper 95% Confidence Interval: 2.67709171198173
##
## cooking
## -----
## Center: -0.23622969866115
## Standard Deviation: 0.584364707860139
## Lower 95% Confidence Interval: -1.38158452606702
## Upper 95% Confidence Interval: 0.909125128744723
##
## eco
## -----
## Center: -0.0648290166401538
## Standard Deviation: 0.881946342556454
## Lower 95% Confidence Interval: -1.7934438480508
## Upper 95% Confidence Interval: 1.6637858147705
##
## computers
## -----
## Center: -0.094518244997988
## Standard Deviation: 0.659059488662035
## Lower 95% Confidence Interval: -1.38627484277558
## Upper 95% Confidence Interval: 1.1972383527796
##
## business
## -----
## Center: 0.490937875297595
## Standard Deviation: 1.25497157265512
## Lower 95% Confidence Interval: -1.96880640710644
## Upper 95% Confidence Interval: 2.95068215770163
##
## outdoors
## -----
## Center: 0.0646829156886185
## Standard Deviation: 0.818731514872305
## Lower 95% Confidence Interval: -1.5400308534611
## Upper 95% Confidence Interval: 1.66939668483834
##
## crafts
## -----
## Center: -0.0102101330921908
## Standard Deviation: 0.934714898888674
## Lower 95% Confidence Interval: -1.84225133491399
## Upper 95% Confidence Interval: 1.82183106872961
##
## automotive
## -----
## Center: -0.216689765031682

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## Standard Deviation: 0.633031403053626
## Lower 95% Confidence Interval: -1.45743131501679
## Upper 95% Confidence Interval: 1.02405178495343
##
## art
## -----
## Center: -0.214090215963244
## Standard Deviation: 0.483349649136933
## Lower 95% Confidence Interval: -1.16145552827163
## Upper 95% Confidence Interval: 0.733275096345145
##
## religion
## -----
## Center: 0.10134919489029
## Standard Deviation: 0.656453389698278
## Lower 95% Confidence Interval: -1.18529944891834
## Upper 95% Confidence Interval: 1.38799783869892
##
## beauty
## -----
## Center: -0.0101074067025052
## Standard Deviation: 0.687279511506127
## Lower 95% Confidence Interval: -1.35717524925451
## Upper 95% Confidence Interval: 1.3369604358495
##
## parenting
## -----
## Center: -0.216024652450434
## Standard Deviation: 0.582041205528082
## Lower 95% Confidence Interval: -1.35682541528547
## Upper 95% Confidence Interval: 0.924776110384606
##
## dating
## -----
## Center: -0.124632515942335
## Standard Deviation: 0.665163228235268
## Lower 95% Confidence Interval: -1.42835244328346
## Upper 95% Confidence Interval: 1.17908741139879
##
## school
## -----
## Center: -0.27274312959264
## Standard Deviation: 0.610931868542549
## Lower 95% Confidence Interval: -1.47016959193604
## Upper 95% Confidence Interval: 0.924683332750756
##
## personal_fitness
## -----
## Center: -0.223367523843778
## Standard Deviation: 0.611088641056817
## Lower 95% Confidence Interval: -1.42110126031514
## Upper 95% Confidence Interval: 0.974366212627584
##
## fashion

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## -----
## Center: -0.119436394046026
## Standard Deviation: 0.647923742628349
## Lower 95% Confidence Interval: -1.38936692959759
## Upper 95% Confidence Interval: 1.15049414150554
##
## small_business
## -----
## Center: 0.757385312267735
## Standard Deviation: 1.51312405887005
## Lower 95% Confidence Interval: -2.20833784311755
## Upper 95% Confidence Interval: 3.72310846765303
##
## spam
## -----
## Center: -0.0776872667656696
## Standard Deviation: 0
## Lower 95% Confidence Interval: -0.0776872667656696
## Upper 95% Confidence Interval: -0.0776872667656696
##
## adult
## -----
## Center: -0.160217050564711
## Standard Deviation: 0.489272867662352
## Lower 95% Confidence Interval: -1.11919187118292
## Upper 95% Confidence Interval: 0.798757770053499
##
## Metrics for Cluster # 7 :
## chatter
## -----
## Center: -0.069343644340514
## Standard Deviation: 0.857134559285481
## Lower 95% Confidence Interval: -1.74932738054006
## Upper 95% Confidence Interval: 1.61064009185903
##
## current_events
## -----
## Center: 0.0650486310931656
## Standard Deviation: 1.00189683006718
## Lower 95% Confidence Interval: -1.89866915583851
## Upper 95% Confidence Interval: 2.02876641802484
##
## travel
## -----
## Center: -0.186424895594627
## Standard Deviation: 0.606773477054693
## Lower 95% Confidence Interval: -1.37570091062182
## Upper 95% Confidence Interval: 1.00285111943257
##
## photo_sharing
## -----
## Center: -0.218389451611844
## Standard Deviation: 0.826385860401557

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## Lower 95% Confidence Interval: -1.8381057379989
## Upper 95% Confidence Interval: 1.40132683477521
##
## uncategorized
## -----
## Center: -0.111069932226274
## Standard Deviation: 0.9289722938368
## Lower 95% Confidence Interval: -1.9318556281464
## Upper 95% Confidence Interval: 1.70971576369385
##
## tv_film
## -----
## Center: -0.0305807432390292
## Standard Deviation: 0.733402628208889
## Lower 95% Confidence Interval: -1.46804989452845
## Upper 95% Confidence Interval: 1.40688840805039
##
## sports_fandom
## -----
## Center: 0.687982268973505
## Standard Deviation: 0.939139224587654
## Lower 95% Confidence Interval: -1.1527306112183
## Upper 95% Confidence Interval: 2.52869514916531
##
## politics
## -----
## Center: 1.24015314936562
## Standard Deviation: 0.984779642353046
## Lower 95% Confidence Interval: -0.690014949646349
## Upper 95% Confidence Interval: 3.17032124837759
##
## food
## -----
## Center: -0.153638279680577
## Standard Deviation: 0.712315283713809
## Lower 95% Confidence Interval: -1.54977623575964
## Upper 95% Confidence Interval: 1.24249967639849
##
## family
## -----
## Center: 0.217345673273736
## Standard Deviation: 0.945700494788019
## Lower 95% Confidence Interval: -1.63622729651078
## Upper 95% Confidence Interval: 2.07091864305825
##
## home_and_garden
## -----
## Center: 0.139531792363763
## Standard Deviation: 1.07946011328857
## Lower 95% Confidence Interval: -1.97621002968184
## Upper 95% Confidence Interval: 2.25527361440936
##
## music
## -----

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## Center: -0.0992724664581823
## Standard Deviation: 0.756655364782463
## Lower 95% Confidence Interval: -1.58231698143181
## Upper 95% Confidence Interval: 1.38377204851544
##
## news
## -----
## Center: 2.71052819885862
## Standard Deviation: 1.5281522525571
## Lower 95% Confidence Interval: -0.284650216153298
## Upper 95% Confidence Interval: 5.70570661387053
##
## online_gaming
## -----
## Center: -0.126833132194546
## Standard Deviation: 0.630349685335883
## Lower 95% Confidence Interval: -1.36231851545288
## Upper 95% Confidence Interval: 1.10865225106379
##
## shopping
## -----
## Center: -0.185520750785353
## Standard Deviation: 0.803015025494349
## Lower 95% Confidence Interval: -1.75943020075428
## Upper 95% Confidence Interval: 1.38838869918357
##
## health_nutrition
## -----
## Center: -0.263742383584109
## Standard Deviation: 0.589118099132105
## Lower 95% Confidence Interval: -1.41841385788304
## Upper 95% Confidence Interval: 0.890929090714818
##
## college_uni
## -----
## Center: -0.207384379249356
## Standard Deviation: 0.619416867091431
## Lower 95% Confidence Interval: -1.42144143874856
## Upper 95% Confidence Interval: 1.00667268024985
##
## sports_playing
## -----
## Center: -0.103822455657928
## Standard Deviation: 0.775764144092009
## Lower 95% Confidence Interval: -1.62432017807826
## Upper 95% Confidence Interval: 1.41667526676241
##
## cooking
## -----
## Center: -0.238995290794774
## Standard Deviation: 0.588430226336165
## Lower 95% Confidence Interval: -1.39231853441366
## Upper 95% Confidence Interval: 0.914327952824109
##

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## eco
## -----
## Center: -0.103340412281615
## Standard Deviation: 0.896775272197781
## Lower 95% Confidence Interval: -1.86101994578927
## Upper 95% Confidence Interval: 1.65433912122604
##
## computers
## -----
## Center: -0.195837286087139
## Standard Deviation: 0.613330175336503
## Lower 95% Confidence Interval: -1.39796442974669
## Upper 95% Confidence Interval: 1.00628985757241
##
## business
## -----
## Center: -0.109845287679016
## Standard Deviation: 0.883577243955183
## Lower 95% Confidence Interval: -1.84165668583117
## Upper 95% Confidence Interval: 1.62196611047314
##
## outdoors
## -----
## Center: 0.260549471140356
## Standard Deviation: 0.893128198771747
## Lower 95% Confidence Interval: -1.48998179845227
## Upper 95% Confidence Interval: 2.01108074073298
##
## crafts
## -----
## Center: -0.1585985692667
## Standard Deviation: 0.83753680130524
## Lower 95% Confidence Interval: -1.80017069982497
## Upper 95% Confidence Interval: 1.48297356129157
##
## automotive
## -----
## Center: 2.63368211650963
## Standard Deviation: 1.69669434651585
## Lower 95% Confidence Interval: -0.691838802661438
## Upper 95% Confidence Interval: 5.95920303568071
##
## art
## -----
## Center: -0.15971542723745
## Standard Deviation: 0.54153755962711
## Lower 95% Confidence Interval: -1.22112904410659
## Upper 95% Confidence Interval: 0.901698189631686
##
## religion
## -----
## Center: -0.186450517305755
## Standard Deviation: 0.65357093849588
## Lower 95% Confidence Interval: -1.46744955675768

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## Upper 95% Confidence Interval: 1.09454852214617
##
## beauty
## -----
## Center: -0.18487292616046
## Standard Deviation: 0.632246246313593
## Lower 95% Confidence Interval: -1.4240755689351
## Upper 95% Confidence Interval: 1.05432971661418
##
## parenting
## -----
## Center: 0.047068250803071
## Standard Deviation: 0.7165015352183
## Lower 95% Confidence Interval: -1.3572747582248
## Upper 95% Confidence Interval: 1.45141125983094
##
## dating
## -----
## Center: -0.0901833054420525
## Standard Deviation: 0.65920071468455
## Lower 95% Confidence Interval: -1.38221670622377
## Upper 95% Confidence Interval: 1.20185009533967
##
## school
## -----
## Center: 0.0103113417076232
## Standard Deviation: 0.837634440653427
## Lower 95% Confidence Interval: -1.63145216197309
## Upper 95% Confidence Interval: 1.65207484538834
##
## personal_fitness
## -----
## Center: -0.240900647391769
## Standard Deviation: 0.640517029772822
## Lower 95% Confidence Interval: -1.4963140257465
## Upper 95% Confidence Interval: 1.01451273096296
##
## fashion
## -----
## Center: -0.234814261785483
## Standard Deviation: 0.563039796531616
## Lower 95% Confidence Interval: -1.33837226298745
## Upper 95% Confidence Interval: 0.868743739416484
##
## small_business
## -----
## Center: -0.180211361278424
## Standard Deviation: 0.765291767874492
## Lower 95% Confidence Interval: -1.68018322631243
## Upper 95% Confidence Interval: 1.31976050375558
##
## spam
## -----
## Center: -0.0776872667656692

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## Standard Deviation: 0
## Lower 95% Confidence Interval: -0.0776872667656692
## Upper 95% Confidence Interval: -0.0776872667656692
##
## adult
## -----
## Center: -0.181961681799937
## Standard Deviation: 0.269983957760668
## Lower 95% Confidence Interval: -0.711130239010846
## Upper 95% Confidence Interval: 0.347206875410973
##
##
## Metrics for Cluster # 8 :
## chatter
## -----
## Center: 0.0720588021144209
## Standard Deviation: 1.04680729783875
## Lower 95% Confidence Interval: -1.97968350164954
## Upper 95% Confidence Interval: 2.12380110587838
##
## current_events
## -----
## Center: 0.276847109715186
## Standard Deviation: 1.19987261111235
## Lower 95% Confidence Interval: -2.07490320806502
## Upper 95% Confidence Interval: 2.62859742749539
##
## travel
## -----
## Center: 0.288727032142984
## Standard Deviation: 1.22304836466797
## Lower 95% Confidence Interval: -2.10844776260623
## Upper 95% Confidence Interval: 2.6859018268922
##
## photo_sharing
## -----
## Center: -0.0907182754901948
## Standard Deviation: 0.818828537382464
## Lower 95% Confidence Interval: -1.69562220875982
## Upper 95% Confidence Interval: 1.51418565777943
##
## uncategorized
## -----
## Center: 0.112598535693863
## Standard Deviation: 1.0649027445287
## Lower 95% Confidence Interval: -1.9746108435824
## Upper 95% Confidence Interval: 2.19980791497012
##
## tv_film
## -----
## Center: -0.116191009123681
## Standard Deviation: 0.812850220203097
## Lower 95% Confidence Interval: -1.70937744072175
## Upper 95% Confidence Interval: 1.47699542247439

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##
## sports_fandom
## -----
## Center: 0.140656694006494
## Standard Deviation: 1.18075315581852
## Lower 95% Confidence Interval: -2.17361949139781
## Upper 95% Confidence Interval: 2.4549328794108
##
## politics
## -----
## Center: 0.150527400107683
## Standard Deviation: 1.04442524526783
## Lower 95% Confidence Interval: -1.89654608061727
## Upper 95% Confidence Interval: 2.19760088083264
##
## food
## -----
## Center: 0.0404942197283056
## Standard Deviation: 0.813743237624757
## Lower 95% Confidence Interval: -1.55444252601622
## Upper 95% Confidence Interval: 1.63543096547283
##
## family
## -----
## Center: -0.0599955519788684
## Standard Deviation: 0.785192055626032
## Lower 95% Confidence Interval: -1.59897198100589
## Upper 95% Confidence Interval: 1.47898087704815
##
## home_and_garden
## -----
## Center: 0.235101907038875
## Standard Deviation: 1.04427634471895
## Lower 95% Confidence Interval: -1.81167972861027
## Upper 95% Confidence Interval: 2.28188354268802
##
## music
## -----
## Center: 0.0141826413787957
## Standard Deviation: 0.890780059631991
## Lower 95% Confidence Interval: -1.73174627549991
## Upper 95% Confidence Interval: 1.7601115582575
##
## news
## -----
## Center: -0.000690199921603032
## Standard Deviation: 0.824362937544378
## Lower 95% Confidence Interval: -1.61644155750858
## Upper 95% Confidence Interval: 1.61506115766538
##
## online_gaming
## -----
## Center: 0.0893590644443737
## Standard Deviation: 0.963933520341916

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## Lower 95% Confidence Interval: -1.79995063542578
## Upper 95% Confidence Interval: 1.97866876431453
##
## shopping
## -----
## Center: -0.237822639812089
## Standard Deviation: 0.873817352473134
## Lower 95% Confidence Interval: -1.95050465065943
## Upper 95% Confidence Interval: 1.47485937103525
##
## health_nutrition
## -----
## Center: 0.050860593608191
## Standard Deviation: 1.02525186927171
## Lower 95% Confidence Interval: -1.95863307016437
## Upper 95% Confidence Interval: 2.06035425738075
##
## college_uni
## -----
## Center: 0.127327531142541
## Standard Deviation: 1.15951539699605
## Lower 95% Confidence Interval: -2.14532264696972
## Upper 95% Confidence Interval: 2.3999777092548
##
## sports_playing
## -----
## Center: -0.11129035846681
## Standard Deviation: 0.938165900951443
## Lower 95% Confidence Interval: -1.95009552433164
## Upper 95% Confidence Interval: 1.72751480739802
##
## cooking
## -----
## Center: -0.0589821944029034
## Standard Deviation: 0.955873525748154
## Lower 95% Confidence Interval: -1.93249430486929
## Upper 95% Confidence Interval: 1.81452991606348
##
## eco
## -----
## Center: 0.44799947508776
## Standard Deviation: 1.4765212760217
## Lower 95% Confidence Interval: -2.44598222591478
## Upper 95% Confidence Interval: 3.3419811760903
##
## computers
## -----
## Center: 0.297532904919092
## Standard Deviation: 1.32935092522892
## Lower 95% Confidence Interval: -2.3079949085296
## Upper 95% Confidence Interval: 2.90306071836778
##
## business
## -----

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## Center: -0.346009008034543
## Standard Deviation: 0.637338580447101
## Lower 95% Confidence Interval: -1.59519262571086
## Upper 95% Confidence Interval: 0.903174609641776
##
## outdoors
## -----
## Center: 0.297803103035146
## Standard Deviation: 1.15702718962023
## Lower 95% Confidence Interval: -1.96997018862051
## Upper 95% Confidence Interval: 2.5655763946908
##
## crafts
## -----
## Center: 0.217933731831001
## Standard Deviation: 1.00592496535516
## Lower 95% Confidence Interval: -1.75367920026511
## Upper 95% Confidence Interval: 2.18954666392711
##
## automotive
## -----
## Center: 0.124535639889974
## Standard Deviation: 0.804627158840129
## Lower 95% Confidence Interval: -1.45253359143668
## Upper 95% Confidence Interval: 1.70160487121663
##
## art
## -----
## Center: 0.331675372405682
## Standard Deviation: 1.14651149433302
## Lower 95% Confidence Interval: -1.91548715648704
## Upper 95% Confidence Interval: 2.57883790129841
##
## religion
## -----
## Center: 0.120701794287181
## Standard Deviation: 1.27649848728719
## Lower 95% Confidence Interval: -2.38123524079571
## Upper 95% Confidence Interval: 2.62263882937007
##
## beauty
## -----
## Center: -0.100701953544462
## Standard Deviation: 0.687453127778711
## Lower 95% Confidence Interval: -1.44811008399074
## Upper 95% Confidence Interval: 1.24670617690181
##
## parenting
## -----
## Center: 0.186584142420939
## Standard Deviation: 0.980467688894235
## Lower 95% Confidence Interval: -1.73513252781176
## Upper 95% Confidence Interval: 2.10830081265364
##

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## dating
## -----
## Center: -0.00952824412575894
## Standard Deviation: 1.006287933907
## Lower 95% Confidence Interval: -1.98185259458347
## Upper 95% Confidence Interval: 1.96279610633196
##
## school
## -----
## Center: 0.0924482363559692
## Standard Deviation: 1.13472077602831
## Lower 95% Confidence Interval: -2.13160448465953
## Upper 95% Confidence Interval: 2.31650095737147
##
## personal_fitness
## -----
## Center: 0.121832360423394
## Standard Deviation: 1.04468509056425
## Lower 95% Confidence Interval: -1.92575041708253
## Upper 95% Confidence Interval: 2.16941513792932
##
## fashion
## -----
## Center: -0.0204498721756276
## Standard Deviation: 0.927078000310277
## Lower 95% Confidence Interval: -1.83752275278377
## Upper 95% Confidence Interval: 1.79662300843251
##
## small_business
## -----
## Center: 0.31428826136127
## Standard Deviation: 1.4049682471705
## Lower 95% Confidence Interval: -2.4394495030929
## Upper 95% Confidence Interval: 3.06802602581544
##
## spam
## -----
## Center: 12.4188645015407
## Standard Deviation: 2.40027700568449
## Lower 95% Confidence Interval: 7.71432157039906
## Upper 95% Confidence Interval: 17.1234074326823
##
## adult
## -----
## Center: 3.75022215454461
## Standard Deviation: 2.89830548337495
## Lower 95% Confidence Interval: -1.93045659287029
## Upper 95% Confidence Interval: 9.43090090195951
##
## Metrics for Cluster # 9 :
## chatter
## -----
## Center: -0.364266575749976

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```

## Standard Deviation: 0.608176856507929
## Lower 95% Confidence Interval: -1.55629321450552
## Upper 95% Confidence Interval: 0.827760063005565
##
## current_events
## -----
## Center: -0.220827251206864
## Standard Deviation: 0.878173890255105
## Lower 95% Confidence Interval: -1.94204807610687
## Upper 95% Confidence Interval: 1.50039357369314
##
## travel
## -----
## Center: -0.226361424589939
## Standard Deviation: 0.527660814831644
## Lower 95% Confidence Interval: -1.26057662165996
## Upper 95% Confidence Interval: 0.807853772480083
##
## photo_sharing
## -----
## Center: -0.407533290033429
## Standard Deviation: 0.570893972026412
## Lower 95% Confidence Interval: -1.5264854752052
## Upper 95% Confidence Interval: 0.711418895138339
##
## uncategorized
## -----
## Center: -0.212909102445642
## Standard Deviation: 0.815788417689434
## Lower 95% Confidence Interval: -1.81185440111693
## Upper 95% Confidence Interval: 1.38603619622565
##
## tv_film
## -----
## Center: -0.241843824961633
## Standard Deviation: 0.568658317098388
## Lower 95% Confidence Interval: -1.35641412647447
## Upper 95% Confidence Interval: 0.872726476551208
##
## sports_fandom
## -----
## Center: -0.319494583881217
## Standard Deviation: 0.564945685222687
## Lower 95% Confidence Interval: -1.42678812691768
## Upper 95% Confidence Interval: 0.787798959155249
##
## politics
## -----
## Center: -0.29278865801727
## Standard Deviation: 0.457985143434689
## Lower 95% Confidence Interval: -1.19043953914926
## Upper 95% Confidence Interval: 0.60486222311472
##
## food

```

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## -----
## Center: -0.392057727956351
## Standard Deviation: 0.570615800465116
## Lower 95% Confidence Interval: -1.51046469686798
## Upper 95% Confidence Interval: 0.726349240955276
##
## family
## -----
## Center: -0.300078299407184
## Standard Deviation: 0.677993234500948
## Lower 95% Confidence Interval: -1.62894503902904
## Upper 95% Confidence Interval: 1.02878844021467
##
## home_and_garden
## -----
## Center: -0.211011661999708
## Standard Deviation: 0.810759704449729
## Lower 95% Confidence Interval: -1.80010068272118
## Upper 95% Confidence Interval: 1.37807735872176
##
## music
## -----
## Center: -0.286172291338605
## Standard Deviation: 0.615744379787548
## Lower 95% Confidence Interval: -1.4930312757222
## Upper 95% Confidence Interval: 0.92068669304499
##
## news
## -----
## Center: -0.317406094164519
## Standard Deviation: 0.478591196585892
## Lower 95% Confidence Interval: -1.25544483947287
## Upper 95% Confidence Interval: 0.620632651143829
##
## online_gaming
## -----
## Center: -0.23838689143118
## Standard Deviation: 0.435571220721319
## Lower 95% Confidence Interval: -1.09210648404497
## Upper 95% Confidence Interval: 0.615332701182605
##
## shopping
## -----
## Center: -0.383454074190715
## Standard Deviation: 0.522536282142593
## Lower 95% Confidence Interval: -1.4076251871902
## Upper 95% Confidence Interval: 0.640717038808767
##
## health_nutrition
## -----
## Center: -0.417333185981529
## Standard Deviation: 0.294293194636371
## Lower 95% Confidence Interval: -0.994147847468817
## Upper 95% Confidence Interval: 0.159481475505759

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##
## college_uni
## -----
## Center: -0.279310769830094
## Standard Deviation: 0.456041860575796
## Lower 95% Confidence Interval: -1.17315281655865
## Upper 95% Confidence Interval: 0.614531276898467
##
## sports_playing
## -----
## Center: -0.272559699723986
## Standard Deviation: 0.650780434951786
## Lower 95% Confidence Interval: -1.54808935222949
## Upper 95% Confidence Interval: 1.00296995278151
##
## cooking
## -----
## Center: -0.347543859641873
## Standard Deviation: 0.449982228382167
## Lower 95% Confidence Interval: -1.22950902727092
## Upper 95% Confidence Interval: 0.534421307987174
##
## eco
## -----
## Center: -0.293990502087953
## Standard Deviation: 0.701957877809027
## Lower 95% Confidence Interval: -1.66982794259365
## Upper 95% Confidence Interval: 1.08184693841774
##
## computers
## -----
## Center: -0.263837409892696
## Standard Deviation: 0.523737466240353
## Lower 95% Confidence Interval: -1.29036284372379
## Upper 95% Confidence Interval: 0.762688023938396
##
## business
## -----
## Center: -0.251352917324256
## Standard Deviation: 0.740554784350274
## Lower 95% Confidence Interval: -1.70284029465079
## Upper 95% Confidence Interval: 1.20013446000228
##
## outdoors
## -----
## Center: -0.422515669281262
## Standard Deviation: 0.433072898138715
## Lower 95% Confidence Interval: -1.27133854963314
## Upper 95% Confidence Interval: 0.42630721107062
##
## crafts
## -----
## Center: -0.295968913372641
## Standard Deviation: 0.664255076533962

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## Lower 95% Confidence Interval: -1.59790886337921
## Upper 95% Confidence Interval: 1.00597103663392
##
## automotive
## -----
## Center: -0.309061333664984
## Standard Deviation: 0.517756262513434
## Lower 95% Confidence Interval: -1.32386360819132
## Upper 95% Confidence Interval: 0.705740940861347
##
## art
## -----
## Center: -0.229911587676844
## Standard Deviation: 0.462666458620552
## Lower 95% Confidence Interval: -1.13673784657313
## Upper 95% Confidence Interval: 0.676914671219437
##
## religion
## -----
## Center: -0.301152175355604
## Standard Deviation: 0.515442874301459
## Lower 95% Confidence Interval: -1.31142020898646
## Upper 95% Confidence Interval: 0.709115858275255
##
## beauty
## -----
## Center: -0.275252448402884
## Standard Deviation: 0.513079095998939
## Lower 95% Confidence Interval: -1.2808874765608
## Upper 95% Confidence Interval: 0.730382579755035
##
## parenting
## -----
## Center: -0.325810495470219
## Standard Deviation: 0.518740551229607
## Lower 95% Confidence Interval: -1.34254197588025
## Upper 95% Confidence Interval: 0.69092098493981
##
## dating
## -----
## Center: -0.221843887923455
## Standard Deviation: 0.449682719587518
## Lower 95% Confidence Interval: -1.10322201831499
## Upper 95% Confidence Interval: 0.65953424246808
##
## school
## -----
## Center: -0.330445362759727
## Standard Deviation: 0.578724991804626
## Lower 95% Confidence Interval: -1.46474634669679
## Upper 95% Confidence Interval: 0.803855621177341
##
## personal_fitness
## -----

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## Center: -0.436636869659865
## Standard Deviation: 0.31480057240653
## Lower 95% Confidence Interval: -1.05364599157666
## Upper 95% Confidence Interval: 0.180372252256934
##
## fashion
## -----
## Center: -0.294496036909451
## Standard Deviation: 0.489251514846195
## Lower 95% Confidence Interval: -1.25342900600799
## Upper 95% Confidence Interval: 0.664436932189092
##
## small_business
## -----
## Center: -0.225999438528998
## Standard Deviation: 0.723657145200259
## Lower 95% Confidence Interval: -1.64436744312151
## Upper 95% Confidence Interval: 1.19236856606351
##
## spam
## -----
## Center: -0.0776872667656724
## Standard Deviation: 0
## Lower 95% Confidence Interval: -0.0776872667656724
## Upper 95% Confidence Interval: -0.0776872667656724
##
## adult
## -----
## Center: -0.162684702901306
## Standard Deviation: 0.312095199152535
## Lower 95% Confidence Interval: -0.774391293240274
## Upper 95% Confidence Interval: 0.449021887437661
##
##
## Metrics for Cluster # 10 :
## chatter
## -----
## Center: -0.156858963903056
## Standard Deviation: 0.882251046762612
## Lower 95% Confidence Interval: -1.88607101555778
## Upper 95% Confidence Interval: 1.57235308775166
##
## current_events
## -----
## Center: 0.0907311079970593
## Standard Deviation: 1.05733177379326
## Lower 95% Confidence Interval: -1.98163916863772
## Upper 95% Confidence Interval: 2.16310138463184
##
## travel
## -----
## Center: -0.104585060417556
## Standard Deviation: 0.764842262106812
## Lower 95% Confidence Interval: -1.60367589414691

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## Upper 95% Confidence Interval: 1.3945057733118
##
## photo_sharing
## -----
## Center: -0.100089965591521
## Standard Deviation: 0.871146586866164
## Lower 95% Confidence Interval: -1.8075372758492
## Upper 95% Confidence Interval: 1.60735734466616
##
## uncategorized
## -----
## Center: -0.131033642348027
## Standard Deviation: 0.896944278233971
## Lower 95% Confidence Interval: -1.88904442768661
## Upper 95% Confidence Interval: 1.62697714299056
##
## tv_film
## -----
## Center: -0.110943244926131
## Standard Deviation: 0.740598506328584
## Lower 95% Confidence Interval: -1.56251631733016
## Upper 95% Confidence Interval: 1.34062982747789
##
## sports_fandom
## -----
## Center: 2.13325117593158
## Standard Deviation: 1.41737057060768
## Lower 95% Confidence Interval: -0.644795142459474
## Upper 95% Confidence Interval: 4.91129749432264
##
## politics
## -----
## Center: -0.226301887458308
## Standard Deviation: 0.643213548684744
## Lower 95% Confidence Interval: -1.48700044288041
## Upper 95% Confidence Interval: 1.03439666796379
##
## food
## -----
## Center: 1.90349430976169
## Standard Deviation: 1.43896399071459
## Lower 95% Confidence Interval: -0.916875112038904
## Upper 95% Confidence Interval: 4.72386373156228
##
## family
## -----
## Center: 1.54715325556324
## Standard Deviation: 1.54924188232327
## Lower 95% Confidence Interval: -1.48936083379038
## Upper 95% Confidence Interval: 4.58366734491686
##
## home_and_garden
## -----
## Center: 0.172432193533235

```

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## Standard Deviation: 1.1018734857418
## Lower 95% Confidence Interval: -1.98723983852069
## Upper 95% Confidence Interval: 2.33210422558716
##
## music
## -----
## Center: 0.0015683805632161
## Standard Deviation: 0.861413049602916
## Lower 95% Confidence Interval: -1.6868011966585
## Upper 95% Confidence Interval: 1.68993795778493
##
## news
## -----
## Center: -0.112875764035164
## Standard Deviation: 0.778256923934176
## Lower 95% Confidence Interval: -1.63825933494615
## Upper 95% Confidence Interval: 1.41250780687582
##
## online_gaming
## -----
## Center: -0.0824079525622227
## Standard Deviation: 0.686928164356845
## Lower 95% Confidence Interval: -1.42878715470164
## Upper 95% Confidence Interval: 1.26397124957719
##
## shopping
## -----
## Center: -0.0248646916186731
## Standard Deviation: 0.937879404962931
## Lower 95% Confidence Interval: -1.86310832534602
## Upper 95% Confidence Interval: 1.81337894210867
##
## health_nutrition
## -----
## Center: -0.161298149479643
## Standard Deviation: 0.664782329327639
## Lower 95% Confidence Interval: -1.46427151496182
## Upper 95% Confidence Interval: 1.14167521600253
##
## college_uni
## -----
## Center: -0.150401286448125
## Standard Deviation: 0.643965268970733
## Lower 95% Confidence Interval: -1.41257321363076
## Upper 95% Confidence Interval: 1.11177064073451
##
## sports_playing
## -----
## Center: 0.0913363620594416
## Standard Deviation: 0.938086217006026
## Lower 95% Confidence Interval: -1.74731262327237
## Upper 95% Confidence Interval: 1.92998534739125
##
## cooking

```

```

## -----
## Center: -0.0971261414867854
## Standard Deviation: 0.742857503259525
## Lower 95% Confidence Interval: -1.55312684787546
## Upper 95% Confidence Interval: 1.35887456490188
##
## eco
## -----
## Center: 0.175910647399608
## Standard Deviation: 1.11130496497686
## Lower 95% Confidence Interval: -2.00224708395504
## Upper 95% Confidence Interval: 2.35406837875426
##
## computers
## -----
## Center: 0.0711715672012639
## Standard Deviation: 0.824646287281437
## Lower 95% Confidence Interval: -1.54513515587035
## Upper 95% Confidence Interval: 1.68747829027288
##
## business
## -----
## Center: 0.0937475419205402
## Standard Deviation: 1.01179208943734
## Lower 95% Confidence Interval: -1.88936495337664
## Upper 95% Confidence Interval: 2.07686003721772
##
## outdoors
## -----
## Center: -0.0972171516521372
## Standard Deviation: 0.744903013813633
## Lower 95% Confidence Interval: -1.55722705872686
## Upper 95% Confidence Interval: 1.36279275542258
##
## crafts
## -----
## Center: 0.685526294461322
## Standard Deviation: 1.42004437963514
## Lower 95% Confidence Interval: -2.09776068962355
## Upper 95% Confidence Interval: 3.4688132785462
##
## automotive
## -----
## Center: 0.119910151549294
## Standard Deviation: 0.897426304698882
## Lower 95% Confidence Interval: -1.63904540566051
## Upper 95% Confidence Interval: 1.8788657087591
##
## art
## -----
## Center: -0.0192032393059262
## Standard Deviation: 0.645154401574909
## Lower 95% Confidence Interval: -1.28370586639275
## Upper 95% Confidence Interval: 1.2452993877809

```



```

##
## religion
## -----
## Center: 2.33036659058491
## Standard Deviation: 1.43595566524155
## Lower 95% Confidence Interval: -0.484106513288523
## Upper 95% Confidence Interval: 5.14483969445835
##
## beauty
## -----
## Center: 0.317215485535617
## Standard Deviation: 0.933863932172747
## Lower 95% Confidence Interval: -1.51315782152297
## Upper 95% Confidence Interval: 2.1475887925942
##
## parenting
## -----
## Center: 2.20678012702646
## Standard Deviation: 1.52235563564444
## Lower 95% Confidence Interval: -0.777036918836642
## Upper 95% Confidence Interval: 5.19059717288957
##
## dating
## -----
## Center: -0.112543535159998
## Standard Deviation: 0.572562144253161
## Lower 95% Confidence Interval: -1.23476533789619
## Upper 95% Confidence Interval: 1.0096782675762
##
## school
## -----
## Center: 1.68452619473238
## Standard Deviation: 1.57026784433505
## Lower 95% Confidence Interval: -1.39319878016432
## Upper 95% Confidence Interval: 4.76225116962909
##
## personal_fitness
## -----
## Center: -0.115918011218431
## Standard Deviation: 0.713770674134005
## Lower 95% Confidence Interval: -1.51490853252108
## Upper 95% Confidence Interval: 1.28307251008422
##
## fashion
## -----
## Center: 0.0027375144288969
## Standard Deviation: 0.765777633455589
## Lower 95% Confidence Interval: -1.49818664714406
## Upper 95% Confidence Interval: 1.50366167600185
##
## small_business
## -----
## Center: 0.0718126202893817
## Standard Deviation: 1.01184376954058

```

```

## Lower 95% Confidence Interval: -1.91140116801016
## Upper 95% Confidence Interval: 2.05502640858892
##
## spam
## -----
## Center: -0.0776872667656701
## Standard Deviation: 0
## Lower 95% Confidence Interval: -0.0776872667656701
## Upper 95% Confidence Interval: -0.0776872667656701
##
## adult
## -----
## Center: -0.0969632565767278
## Standard Deviation: 0.584168712886758
## Lower 95% Confidence Interval: -1.24193393383477
## Upper 95% Confidence Interval: 1.04800742068132
##
##
## Metrics for Cluster # 11 :
## chatter
## -----
## Center: -0.0497712778151008
## Standard Deviation: 0.923151362190966
## Lower 95% Confidence Interval: -1.85914794770939
## Upper 95% Confidence Interval: 1.75960539207919
##
## current_events
## -----
## Center: 0.351369330472484
## Standard Deviation: 1.08836902060306
## Lower 95% Confidence Interval: -1.78183394990952
## Upper 95% Confidence Interval: 2.48457261085449
##
## travel
## -----
## Center: 0.354149224571536
## Standard Deviation: 0.855581230470084
## Lower 95% Confidence Interval: -1.32278998714983
## Upper 95% Confidence Interval: 2.0310884362929
##
## photo_sharing
## -----
## Center: -0.0115096859759831
## Standard Deviation: 0.883468871822975
## Lower 95% Confidence Interval: -1.74310867474901
## Upper 95% Confidence Interval: 1.72008930279705
##
## uncategorized
## -----
## Center: 0.450998139816124
## Standard Deviation: 1.25549348860016
## Lower 95% Confidence Interval: -2.00976909784018
## Upper 95% Confidence Interval: 2.91176537747243
##

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```

## tv_film
## -----
## Center: 2.75812489733295
## Standard Deviation: 1.79136880558627
## Lower 95% Confidence Interval: -0.752957961616131
## Upper 95% Confidence Interval: 6.26920775628204
##
## sports_fandom
## -----
## Center: -0.143986591959761
## Standard Deviation: 0.693171746817604
## Lower 95% Confidence Interval: -1.50260321572226
## Upper 95% Confidence Interval: 1.21463003180274
##
## politics
## -----
## Center: 0.0447592815924227
## Standard Deviation: 0.761392255503751
## Lower 95% Confidence Interval: -1.44756953919493
## Upper 95% Confidence Interval: 1.53708810237978
##
## food
## -----
## Center: 0.240607974419142
## Standard Deviation: 0.897094420472184
## Lower 95% Confidence Interval: -1.51769708970634
## Upper 95% Confidence Interval: 1.99891303854462
##
## family
## -----
## Center: -0.101418794842862
## Standard Deviation: 0.916210622828663
## Lower 95% Confidence Interval: -1.89719161558704
## Upper 95% Confidence Interval: 1.69435402590132
##
## home_and_garden
## -----
## Center: 0.396460483028043
## Standard Deviation: 1.22679359135538
## Lower 95% Confidence Interval: -2.0080549560285
## Upper 95% Confidence Interval: 2.80097592208458
##
## music
## -----
## Center: 0.0870425210645172
## Standard Deviation: 0.873984447215192
## Lower 95% Confidence Interval: -1.62596699547726
## Upper 95% Confidence Interval: 1.80005203760629
##
## news
## -----
## Center: 0.0785357454818506
## Standard Deviation: 0.738997530072892
## Lower 95% Confidence Interval: -1.36989941346102

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## Upper 95% Confidence Interval: 1.52697090442472
##
## online_gaming
## -----
## Center: -0.197784691881985
## Standard Deviation: 0.570104753570989
## Lower 95% Confidence Interval: -1.31519000888112
## Upper 95% Confidence Interval: 0.919620625117153
##
## shopping
## -----
## Center: 0.115123892516216
## Standard Deviation: 0.981726063201882
## Lower 95% Confidence Interval: -1.80905919135947
## Upper 95% Confidence Interval: 2.0393069763919
##
## health_nutrition
## -----
## Center: -0.120845204167593
## Standard Deviation: 0.783683332358845
## Lower 95% Confidence Interval: -1.65686453559093
## Upper 95% Confidence Interval: 1.41517412725574
##
## college_uni
## -----
## Center: -0.0975258877143962
## Standard Deviation: 0.578857546540671
## Lower 95% Confidence Interval: -1.23208667893411
## Upper 95% Confidence Interval: 1.03703490350532
##
## sports_playing
## -----
## Center: -0.116124544747231
## Standard Deviation: 0.826667720262122
## Lower 95% Confidence Interval: -1.73639327646099
## Upper 95% Confidence Interval: 1.50414418696653
##
## cooking
## -----
## Center: -0.0947296321572383
## Standard Deviation: 0.788202382461337
## Lower 95% Confidence Interval: -1.63960630178146
## Upper 95% Confidence Interval: 1.45014703746698
##
## eco
## -----
## Center: 0.198814058086521
## Standard Deviation: 1.08971551716124
## Lower 95% Confidence Interval: -1.93702835554951
## Upper 95% Confidence Interval: 2.33465647172256
##
## computers
## -----
## Center: -0.131459157611235

```

```

## Standard Deviation: 0.755949923472784
## Lower 95% Confidence Interval: -1.61312100761789
## Upper 95% Confidence Interval: 1.35020269239542
##
## business
## -----
## Center: 0.297870454392983
## Standard Deviation: 1.19289326589088
## Lower 95% Confidence Interval: -2.04020034675313
## Upper 95% Confidence Interval: 2.6359412555391
##
## outdoors
## -----
## Center: -0.189241623038636
## Standard Deviation: 0.813503421270431
## Lower 95% Confidence Interval: -1.78370832872868
## Upper 95% Confidence Interval: 1.40522508265141
##
## crafts
## -----
## Center: 1.07067633663123
## Standard Deviation: 1.70291773618901
## Lower 95% Confidence Interval: -2.26704242629924
## Upper 95% Confidence Interval: 4.40839509956169
##
## automotive
## -----
## Center: -0.19917022393591
## Standard Deviation: 0.673921697912828
## Lower 95% Confidence Interval: -1.52005675184505
## Upper 95% Confidence Interval: 1.12171630397323
##
## art
## -----
## Center: 4.1833080556276
## Standard Deviation: 1.84027894832099
## Lower 95% Confidence Interval: 0.576361316918458
## Upper 95% Confidence Interval: 7.79025479433675
##
## religion
## -----
## Center: -0.0643899124684027
## Standard Deviation: 0.67270052235258
## Lower 95% Confidence Interval: -1.38288293627946
## Upper 95% Confidence Interval: 1.25410311134265
##
## beauty
## -----
## Center: -0.017980289383741
## Standard Deviation: 0.704030398264153
## Lower 95% Confidence Interval: -1.39787986998148
## Upper 95% Confidence Interval: 1.361919291214
##
## parenting

```

```

## -----
## Center: -0.174195900769589
## Standard Deviation: 0.783637155538394
## Lower 95% Confidence Interval: -1.71012472562484
## Upper 95% Confidence Interval: 1.36173292408566
##
## dating
## -----
## Center: -0.123893021235935
## Standard Deviation: 0.590285380605002
## Lower 95% Confidence Interval: -1.28085236722174
## Upper 95% Confidence Interval: 1.03306632474987
##
## school
## -----
## Center: 0.0982644177295543
## Standard Deviation: 0.834212453033985
## Lower 95% Confidence Interval: -1.53679199021706
## Upper 95% Confidence Interval: 1.73332082567617
##
## personal_fitness
## -----
## Center: -0.12750762803539
## Standard Deviation: 0.817656024560479
## Lower 95% Confidence Interval: -1.73011343617393
## Upper 95% Confidence Interval: 1.47509818010315
##
## fashion
## -----
## Center: -0.0112003483851678
## Standard Deviation: 0.725456505281095
## Lower 95% Confidence Interval: -1.43309509873611
## Upper 95% Confidence Interval: 1.41069440196578
##
## small_business
## -----
## Center: 0.635363148073105
## Standard Deviation: 1.42352797547097
## Lower 95% Confidence Interval: -2.15475168384999
## Upper 95% Confidence Interval: 3.4254779799962
##
## spam
## -----
## Center: -0.0776872667656697
## Standard Deviation: 0
## Lower 95% Confidence Interval: -0.0776872667656697
## Upper 95% Confidence Interval: -0.0776872667656697
##
## adult
## -----
## Center: -0.0686211815437831
## Standard Deviation: 0.726965221054735
## Lower 95% Confidence Interval: -1.49347301481106
## Upper 95% Confidence Interval: 1.3562306517235

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##
##
## Metrics for Cluster # 12 :
##  chatter
## -----
## Center: -0.0223737308406186
## Standard Deviation: 0.864607038470738
## Lower 95% Confidence Interval: -1.71700352624327
## Upper 95% Confidence Interval: 1.67225606456203
##
##  current_events
## -----
## Center: -0.0587014591245299
## Standard Deviation: 0.966508319079786
## Lower 95% Confidence Interval: -1.95305776452091
## Upper 95% Confidence Interval: 1.83565484627185
##
##  travel
## -----
## Center: -0.0138717586363455
## Standard Deviation: 0.650090378085481
## Lower 95% Confidence Interval: -1.28804889968389
## Upper 95% Confidence Interval: 1.2603053824112
##
##  photo_sharing
## -----
## Center: -0.212346358115503
## Standard Deviation: 0.791573967071851
## Lower 95% Confidence Interval: -1.76383133357633
## Upper 95% Confidence Interval: 1.33913861734532
##
##  uncategorized
## -----
## Center: 0.23779512121328
## Standard Deviation: 1.09745884255186
## Lower 95% Confidence Interval: -1.91322421018837
## Upper 95% Confidence Interval: 2.38881445261493
##
##  tv_film
## -----
## Center: -0.262703968197143
## Standard Deviation: 0.638238180216966
## Lower 95% Confidence Interval: -1.5136508014224
## Upper 95% Confidence Interval: 0.988242865028109
##
##  sports_fandom
## -----
## Center: -0.159784308178147
## Standard Deviation: 0.726311445228686
## Lower 95% Confidence Interval: -1.58335474082637
## Upper 95% Confidence Interval: 1.26378612447008
##
##  politics
## -----

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## Center: -0.225010823703023
## Standard Deviation: 0.551021696454923
## Lower 95% Confidence Interval: -1.30501334875467
## Upper 95% Confidence Interval: 0.854991701348626
##
## food
## -----
## Center: -0.0723448426311029
## Standard Deviation: 0.690649388817069
## Lower 95% Confidence Interval: -1.42601764471256
## Upper 95% Confidence Interval: 1.28132795945035
##
## family
## -----
## Center: 0.0708971434361698
## Standard Deviation: 0.861026352135666
## Lower 95% Confidence Interval: -1.61671450674974
## Upper 95% Confidence Interval: 1.75850879362208
##
## home_and_garden
## -----
## Center: 0.0511687948781725
## Standard Deviation: 1.08220194099274
## Lower 95% Confidence Interval: -2.0699470094676
## Upper 95% Confidence Interval: 2.17228459922394
##
## music
## -----
## Center: -0.0779449501640232
## Standard Deviation: 0.886233025954073
## Lower 95% Confidence Interval: -1.81496168103401
## Upper 95% Confidence Interval: 1.65907178070596
##
## news
## -----
## Center: -0.167908911460939
## Standard Deviation: 0.57373151080064
## Lower 95% Confidence Interval: -1.29242267263019
## Upper 95% Confidence Interval: 0.956604849708315
##
## online_gaming
## -----
## Center: -0.00593006641554758
## Standard Deviation: 0.756747917053546
## Lower 95% Confidence Interval: -1.4891559838405
## Upper 95% Confidence Interval: 1.4772958510094
##
## shopping
## -----
## Center: -0.209645219742394
## Standard Deviation: 0.72596502715026
## Lower 95% Confidence Interval: -1.6325366729569
## Upper 95% Confidence Interval: 1.21324623347212
##

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## health_nutrition
## -----
## Center: -0.187127792206275
## Standard Deviation: 0.659476529141723
## Lower 95% Confidence Interval: -1.47970178932405
## Upper 95% Confidence Interval: 1.1054462049115
##
## college_uni
## -----
## Center: -0.121329495600033
## Standard Deviation: 0.671260703962192
## Lower 95% Confidence Interval: -1.43700047536593
## Upper 95% Confidence Interval: 1.19434148416586
##
## sports_playing
## -----
## Center: -0.14527266566473
## Standard Deviation: 0.792850362660819
## Lower 95% Confidence Interval: -1.69925937647994
## Upper 95% Confidence Interval: 1.40871404515048
##
## cooking
## -----
## Center: -0.175596243163292
## Standard Deviation: 0.737192843739518
## Lower 95% Confidence Interval: -1.62049421689275
## Upper 95% Confidence Interval: 1.26930173056616
##
## eco
## -----
## Center: 0.158772635131374
## Standard Deviation: 0.989437950387297
## Lower 95% Confidence Interval: -1.78052574762773
## Upper 95% Confidence Interval: 2.09807101789048
##
## computers
## -----
## Center: 0.0565195778106435
## Standard Deviation: 0.789804130238044
## Lower 95% Confidence Interval: -1.49149651745592
## Upper 95% Confidence Interval: 1.60453567307721
##
## business
## -----
## Center: -0.134743538634557
## Standard Deviation: 0.884767522406737
## Lower 95% Confidence Interval: -1.86888788255176
## Upper 95% Confidence Interval: 1.59940080528265
##
## outdoors
## -----
## Center: 0.234249254329101
## Standard Deviation: 0.952527600306362
## Lower 95% Confidence Interval: -1.63270484227137

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## Upper 95% Confidence Interval: 2.10120335092957
##
## crafts
## -----
## Center: 0.0334068327891297
## Standard Deviation: 0.992725546600522
## Lower 95% Confidence Interval: -1.91233523854789
## Upper 95% Confidence Interval: 1.97914890412615
##
## automotive
## -----
## Center: 0.0948104204011382
## Standard Deviation: 0.877500803724081
## Lower 95% Confidence Interval: -1.62509115489806
## Upper 95% Confidence Interval: 1.81471199570034
##
## art
## -----
## Center: -0.102137270900685
## Standard Deviation: 0.582460650354385
## Lower 95% Confidence Interval: -1.24376014559528
## Upper 95% Confidence Interval: 1.03948560379391
##
## religion
## -----
## Center: -0.177071682433096
## Standard Deviation: 0.698175745722789
## Lower 95% Confidence Interval: -1.54549614404976
## Upper 95% Confidence Interval: 1.19135277918357
##
## beauty
## -----
## Center: -0.0875956358541277
## Standard Deviation: 0.683997563005456
## Lower 95% Confidence Interval: -1.42823085934482
## Upper 95% Confidence Interval: 1.25303958763657
##
## parenting
## -----
## Center: 0.0619580536603064
## Standard Deviation: 0.852314945182299
## Lower 95% Confidence Interval: -1.608579238897
## Upper 95% Confidence Interval: 1.73249534621761
##
## dating
## -----
## Center: -0.0884006878562388
## Standard Deviation: 0.544630336305965
## Lower 95% Confidence Interval: -1.15587614701593
## Upper 95% Confidence Interval: 0.979074771303452
##
## school
## -----
## Center: 0.033164519614048

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## Standard Deviation: 0.909003227939217
## Lower 95% Confidence Interval: -1.74848180714682
## Upper 95% Confidence Interval: 1.81481084637491
##
## personal_fitness
## -----
## Center: -0.0633701963277961
## Standard Deviation: 0.782397524228038
## Lower 95% Confidence Interval: -1.59686934381475
## Upper 95% Confidence Interval: 1.47012895115916
##
## fashion
## -----
## Center: -0.15082061882498
## Standard Deviation: 0.669435695229741
## Lower 95% Confidence Interval: -1.46291458147527
## Upper 95% Confidence Interval: 1.16127334382531
##
## small_business
## -----
## Center: 0.424897139999015
## Standard Deviation: 1.25160121405555
## Lower 95% Confidence Interval: -2.02824123954986
## Upper 95% Confidence Interval: 2.87803551954789
##
## spam
## -----
## Center: -0.07768726676567
## Standard Deviation: 0
## Lower 95% Confidence Interval: -0.07768726676567
## Upper 95% Confidence Interval: -0.07768726676567
##
## adult
## -----
## Center: 4.73216905760265
## Standard Deviation: 1.99874056989219
## Lower 95% Confidence Interval: 0.814637540613958
## Upper 95% Confidence Interval: 8.64970057459133
##
## Metrics for Cluster # 13 :
## chatter
## -----
## Center: -0.339831165184961
## Standard Deviation: 0.68800327563795
## Lower 95% Confidence Interval: -1.68831758543534
## Upper 95% Confidence Interval: 1.00865525506542
##
## current_events
## -----
## Center: -0.100373348828688
## Standard Deviation: 0.966679107735283
## Lower 95% Confidence Interval: -1.99506439998984
## Upper 95% Confidence Interval: 1.79431770233247

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##
## travel
## -----
## Center: -0.190961479756523
## Standard Deviation: 0.552574553750514
## Lower 95% Confidence Interval: -1.27400760510753
## Upper 95% Confidence Interval: 0.892084645594485
##
## photo_sharing
## -----
## Center: -0.367385621394087
## Standard Deviation: 0.599161223818069
## Lower 95% Confidence Interval: -1.5417416200775
## Upper 95% Confidence Interval: 0.806970377289328
##
## uncategorized
## -----
## Center: -0.052978755229843
## Standard Deviation: 0.947891326401878
## Lower 95% Confidence Interval: -1.91084575497752
## Upper 95% Confidence Interval: 1.80488824451784
##
## tv_film
## -----
## Center: -0.251338862860882
## Standard Deviation: 0.559190953648705
## Lower 95% Confidence Interval: -1.34735313201234
## Upper 95% Confidence Interval: 0.84467540629058
##
## sports_fandom
## -----
## Center: -0.32326586947772
## Standard Deviation: 0.525465481127315
## Lower 95% Confidence Interval: -1.35317821248726
## Upper 95% Confidence Interval: 0.706646473531817
##
## politics
## -----
## Center: -0.275154445022524
## Standard Deviation: 0.462613034556458
## Lower 95% Confidence Interval: -1.18187599275318
## Upper 95% Confidence Interval: 0.631567102708133
##
## food
## -----
## Center: 0.0767151752903858
## Standard Deviation: 0.728570550089026
## Lower 95% Confidence Interval: -1.3512831028841
## Upper 95% Confidence Interval: 1.50471345346488
##
## family
## -----
## Center: -0.281806051903437
## Standard Deviation: 0.695375449420912

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## Lower 95% Confidence Interval: -1.64474193276842
## Upper 95% Confidence Interval: 1.08112982896155
##
## home_and_garden
## -----
## Center: -0.144768608801241
## Standard Deviation: 0.861425439521706
## Lower 95% Confidence Interval: -1.83316247026378
## Upper 95% Confidence Interval: 1.5436252526613
##
## music
## -----
## Center: -0.174713009206706
## Standard Deviation: 0.677698076613514
## Lower 95% Confidence Interval: -1.50300123936919
## Upper 95% Confidence Interval: 1.15357522095578
##
## news
## -----
## Center: -0.184919488012294
## Standard Deviation: 0.5331276856509
## Lower 95% Confidence Interval: -1.22984975188806
## Upper 95% Confidence Interval: 0.86001077586347
##
## online_gaming
## -----
## Center: -0.173928681553538
## Standard Deviation: 0.51252655933814
## Lower 95% Confidence Interval: -1.17848073785629
## Upper 95% Confidence Interval: 0.830623374749217
##
## shopping
## -----
## Center: -0.303468645555367
## Standard Deviation: 0.581594972700032
## Lower 95% Confidence Interval: -1.44339479204743
## Upper 95% Confidence Interval: 0.836457500936696
##
## health_nutrition
## -----
## Center: 1.30070656491917
## Standard Deviation: 0.825886555135535
## Lower 95% Confidence Interval: -0.318031083146476
## Upper 95% Confidence Interval: 2.91944421298482
##
## college_uni
## -----
## Center: -0.292689528232842
## Standard Deviation: 0.470721087884256
## Lower 95% Confidence Interval: -1.21530286048599
## Upper 95% Confidence Interval: 0.6299238040203
##
## sports_playing
## -----

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## Center: -0.202597504983245
## Standard Deviation: 0.690351028886021
## Lower 95% Confidence Interval: -1.55568552159985
## Upper 95% Confidence Interval: 1.15049051163336
##
## cooking
## -----
## Center: 0.115212987238137
## Standard Deviation: 0.541183200770621
## Lower 95% Confidence Interval: -0.945506086272279
## Upper 95% Confidence Interval: 1.17593206074855
##
## eco
## -----
## Center: 0.0617472801129164
## Standard Deviation: 0.975294902051904
## Lower 95% Confidence Interval: -1.84983072790882
## Upper 95% Confidence Interval: 1.97332528813465
##
## computers
## -----
## Center: -0.207445426179301
## Standard Deviation: 0.587935318984989
## Lower 95% Confidence Interval: -1.35979865138988
## Upper 95% Confidence Interval: 0.944907799031277
##
## business
## -----
## Center: -0.198064277590259
## Standard Deviation: 0.743689324666306
## Lower 95% Confidence Interval: -1.65569535393622
## Upper 95% Confidence Interval: 1.2595667987557
##
## outdoors
## -----
## Center: 0.852956222635278
## Standard Deviation: 1.04957170044345
## Lower 95% Confidence Interval: -1.20420431023388
## Upper 95% Confidence Interval: 2.91011675550443
##
## crafts
## -----
## Center: -0.117924814768008
## Standard Deviation: 0.82916432260493
## Lower 95% Confidence Interval: -1.74308688707367
## Upper 95% Confidence Interval: 1.50723725753766
##
## automotive
## -----
## Center: -0.278206329800578
## Standard Deviation: 0.558016129650036
## Lower 95% Confidence Interval: -1.37191794391465
## Upper 95% Confidence Interval: 0.815505284313494
##

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## art
## -----
## Center: -0.16117247059524
## Standard Deviation: 0.500380325923039
## Lower 95% Confidence Interval: -1.1419179094044
## Upper 95% Confidence Interval: 0.819572968213917
##
## religion
## -----
## Center: -0.301247602718005
## Standard Deviation: 0.460095809133936
## Lower 95% Confidence Interval: -1.20303538862052
## Upper 95% Confidence Interval: 0.60054018318451
##
## beauty
## -----
## Center: -0.277241378687743
## Standard Deviation: 0.501864257933483
## Lower 95% Confidence Interval: -1.26089532423737
## Upper 95% Confidence Interval: 0.706412566861883
##
## parenting
## -----
## Center: -0.290300425456658
## Standard Deviation: 0.493186696970189
## Lower 95% Confidence Interval: -1.25694635151823
## Upper 95% Confidence Interval: 0.676345500604913
##
## dating
## -----
## Center: -0.0939948535533971
## Standard Deviation: 0.458284166427009
## Lower 95% Confidence Interval: -0.992231819750336
## Upper 95% Confidence Interval: 0.804242112643542
##
## school
## -----
## Center: -0.327732960821084
## Standard Deviation: 0.549013865750852
## Lower 95% Confidence Interval: -1.40380013769275
## Upper 95% Confidence Interval: 0.748334216050586
##
## personal_fitness
## -----
## Center: 1.22730358388536
## Standard Deviation: 0.903739859294925
## Lower 95% Confidence Interval: -0.544026540332696
## Upper 95% Confidence Interval: 2.99863370810341
##
## fashion
## -----
## Center: -0.278734639795806
## Standard Deviation: 0.466251848215846
## Lower 95% Confidence Interval: -1.19258826229886

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## Upper 95% Confidence Interval: 0.635118982707253
##
## small_business
## -----
## Center: -0.237022609324518
## Standard Deviation: 0.699676701833303
## Lower 95% Confidence Interval: -1.60838894491779
## Upper 95% Confidence Interval: 1.13434372626876
##
## spam
## -----
## Center: -0.0776872667656703
## Standard Deviation: 0
## Lower 95% Confidence Interval: -0.0776872667656703
## Upper 95% Confidence Interval: -0.0776872667656703
##
## adult
## -----
## Center: -0.170072067744078
## Standard Deviation: 0.306614242982421
## Lower 95% Confidence Interval: -0.771035983989623
## Upper 95% Confidence Interval: 0.430891848501467
##
## Metrics for Cluster # 14 :
## chatter
## -----
## Center: -0.107915176564223
## Standard Deviation: 0.818942459327618
## Lower 95% Confidence Interval: -1.71304239684635
## Upper 95% Confidence Interval: 1.49721204371791
##
## current_events
## -----
## Center: -0.0877435856099796
## Standard Deviation: 0.997726611494012
## Lower 95% Confidence Interval: -2.04328774413824
## Upper 95% Confidence Interval: 1.86780057291828
##
## travel
## -----
## Center: -0.0352330581412143
## Standard Deviation: 0.648503019319548
## Lower 95% Confidence Interval: -1.30629897600753
## Upper 95% Confidence Interval: 1.2358328597251
##
## photo_sharing
## -----
## Center: -0.0190375830321156
## Standard Deviation: 0.844373296902109
## Lower 95% Confidence Interval: -1.67400924496025
## Upper 95% Confidence Interval: 1.63593407889602
##
## uncategorized

```



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## -----
## Center: -0.0617273463973702
## Standard Deviation: 0.928020309203782
## Lower 95% Confidence Interval: -1.88064715243678
## Upper 95% Confidence Interval: 1.75719245964204
##
## tv_film
## -----
## Center: 0.0871956218744243
## Standard Deviation: 0.860516626385439
## Lower 95% Confidence Interval: -1.59941696584104
## Upper 95% Confidence Interval: 1.77380820958989
##
## sports_fandom
## -----
## Center: -0.136749417568176
## Standard Deviation: 0.753775501155415
## Lower 95% Confidence Interval: -1.61414939983279
## Upper 95% Confidence Interval: 1.34065056469644
##
## politics
## -----
## Center: -0.169576448936518
## Standard Deviation: 0.657531484710696
## Lower 95% Confidence Interval: -1.45833815896948
## Upper 95% Confidence Interval: 1.11918526109645
##
## food
## -----
## Center: -0.0977762582814769
## Standard Deviation: 0.754993664349419
## Lower 95% Confidence Interval: -1.57756384040634
## Upper 95% Confidence Interval: 1.38201132384338
##
## family
## -----
## Center: 0.199269652406741
## Standard Deviation: 0.963011502001515
## Lower 95% Confidence Interval: -1.68823289151623
## Upper 95% Confidence Interval: 2.08677219632971
##
## home_and_garden
## -----
## Center: 0.0468905387296905
## Standard Deviation: 0.99297423754014
## Lower 95% Confidence Interval: -1.89933896684898
## Upper 95% Confidence Interval: 1.99312004430836
##
## music
## -----
## Center: -0.0856535731205946
## Standard Deviation: 0.831462269260543
## Lower 95% Confidence Interval: -1.71531962087126
## Upper 95% Confidence Interval: 1.54401247463007

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```

##
## news
## -----
## Center: -0.178829202956211
## Standard Deviation: 0.685815384785063
## Lower 95% Confidence Interval: -1.52302735713493
## Upper 95% Confidence Interval: 1.16536895122251
##
## online_gaming
## -----
## Center: 3.65771321019321
## Standard Deviation: 1.62378844911562
## Lower 95% Confidence Interval: 0.475087849926589
## Upper 95% Confidence Interval: 6.84033857045982
##
## shopping
## -----
## Center: -0.144296411077058
## Standard Deviation: 0.80232672452114
## Lower 95% Confidence Interval: -1.71685679113849
## Upper 95% Confidence Interval: 1.42826396898438
##
## health_nutrition
## -----
## Center: -0.17728359475807
## Standard Deviation: 0.747958296546435
## Lower 95% Confidence Interval: -1.64328185598908
## Upper 95% Confidence Interval: 1.28871466647294
##
## college_uni
## -----
## Center: 3.3660659047356
## Standard Deviation: 1.59304783962359
## Lower 95% Confidence Interval: 0.243692139073366
## Upper 95% Confidence Interval: 6.48843967039782
##
## sports_playing
## -----
## Center: 2.20281346596083
## Standard Deviation: 1.80011602877379
## Lower 95% Confidence Interval: -1.32541395043579
## Upper 95% Confidence Interval: 5.73104088235745
##
## cooking
## -----
## Center: -0.121324033224603
## Standard Deviation: 0.660746028993066
## Lower 95% Confidence Interval: -1.41638625005101
## Upper 95% Confidence Interval: 1.17373818360181
##
## eco
## -----
## Center: -0.0605864269857741
## Standard Deviation: 0.925103978154734

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## Lower 95% Confidence Interval: -1.87379022416905
## Upper 95% Confidence Interval: 1.7526173701975
##
## computers
## -----
## Center: -0.0770398330965764
## Standard Deviation: 0.763171066071832
## Lower 95% Confidence Interval: -1.57285512259737
## Upper 95% Confidence Interval: 1.41877545640421
##
## business
## -----
## Center: -0.089616819897007
## Standard Deviation: 0.898617015086734
## Lower 95% Confidence Interval: -1.85090616946701
## Upper 95% Confidence Interval: 1.67167252967299
##
## outdoors
## -----
## Center: -0.128818437828271
## Standard Deviation: 0.778817145767248
## Lower 95% Confidence Interval: -1.65530004353208
## Upper 95% Confidence Interval: 1.39766316787554
##
## crafts
## -----
## Center: 0.0299194002734119
## Standard Deviation: 0.916527732126192
## Lower 95% Confidence Interval: -1.76647495469392
## Upper 95% Confidence Interval: 1.82631375524075
##
## automotive
## -----
## Center: 0.0611699014796309
## Standard Deviation: 0.809503167589262
## Lower 95% Confidence Interval: -1.52545630699532
## Upper 95% Confidence Interval: 1.64779610995458
##
## art
## -----
## Center: 0.287936209418297
## Standard Deviation: 0.811713794825479
## Lower 95% Confidence Interval: -1.30302282843964
## Upper 95% Confidence Interval: 1.87889524727624
##
## religion
## -----
## Center: -0.190128664379921
## Standard Deviation: 0.760253361100476
## Lower 95% Confidence Interval: -1.68022525213685
## Upper 95% Confidence Interval: 1.29996792337701
##
## beauty
## -----

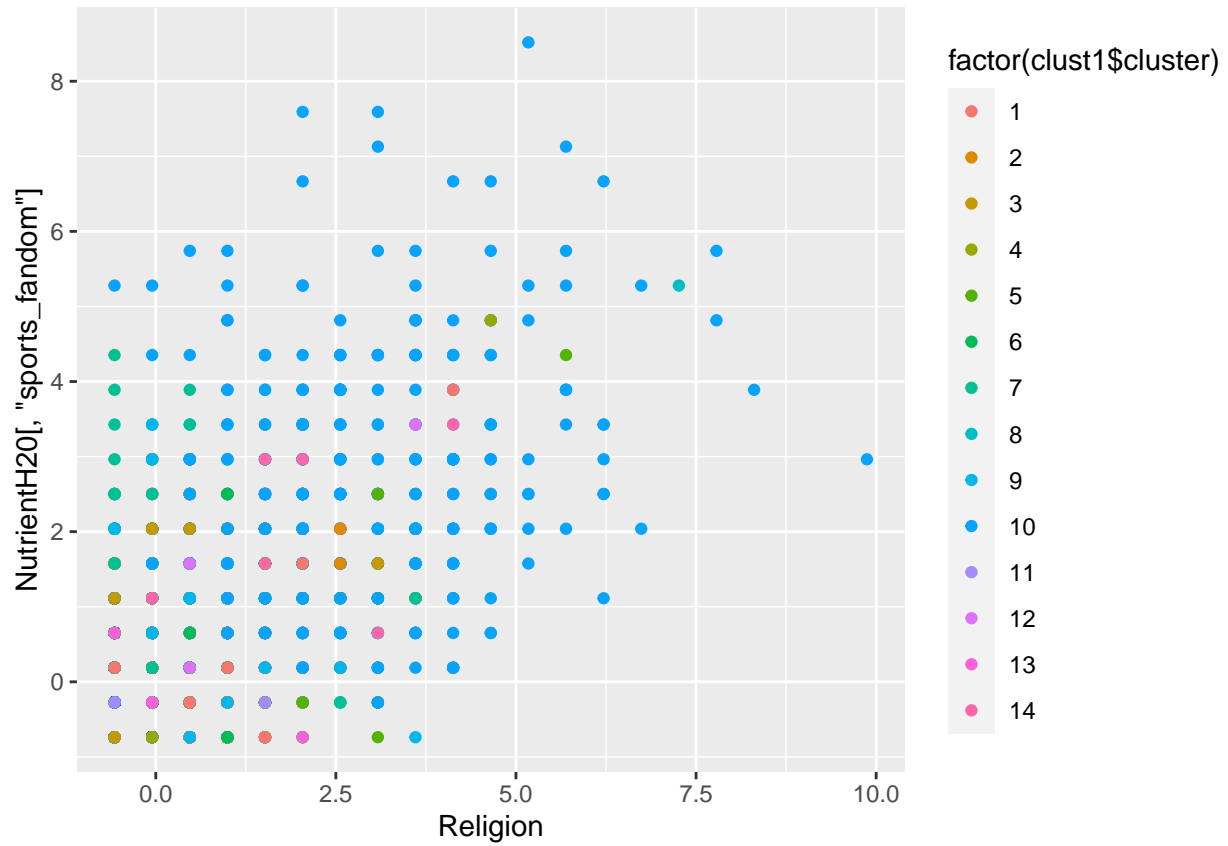
```

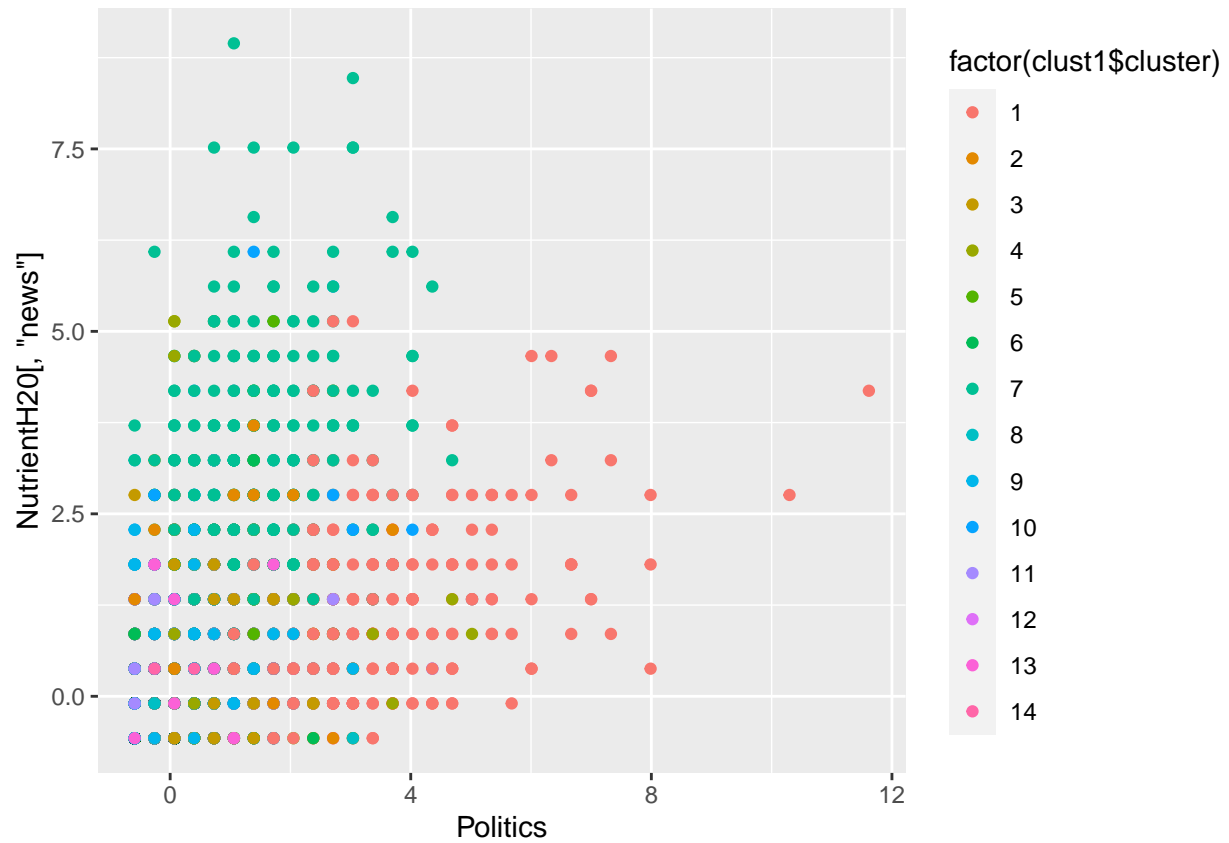
```

## Center: -0.232047144497603
## Standard Deviation: 0.667228138802322
## Lower 95% Confidence Interval: -1.53981429655015
## Upper 95% Confidence Interval: 1.07572000755495
##
## parenting
## -----
## Center: -0.125380544965204
## Standard Deviation: 0.675358302416556
## Lower 95% Confidence Interval: -1.44908281770165
## Upper 95% Confidence Interval: 1.19832172777125
##
## dating
## -----
## Center: -0.0287029949781912
## Standard Deviation: 0.694116679589427
## Lower 95% Confidence Interval: -1.38917168697347
## Upper 95% Confidence Interval: 1.33176569701709
##
## school
## -----
## Center: -0.234078824267699
## Standard Deviation: 0.715922442535139
## Lower 95% Confidence Interval: -1.63728681163657
## Upper 95% Confidence Interval: 1.16912916310117
##
## personal_fitness
## -----
## Center: -0.177214677236847
## Standard Deviation: 0.742606280608709
## Lower 95% Confidence Interval: -1.63272298722992
## Upper 95% Confidence Interval: 1.27829363275622
##
## fashion
## -----
## Center: -0.0732263168757739
## Standard Deviation: 0.654067792740995
## Lower 95% Confidence Interval: -1.35519919064812
## Upper 95% Confidence Interval: 1.20874655689658
##
## small_business
## -----
## Center: 0.0885045735777466
## Standard Deviation: 1.06138756940145
## Lower 95% Confidence Interval: -1.99181506244909
## Upper 95% Confidence Interval: 2.16882420960458
##
## spam
## -----
## Center: -0.0776872667656694
## Standard Deviation: 0
## Lower 95% Confidence Interval: -0.0776872667656694
## Upper 95% Confidence Interval: -0.0776872667656694
##

```

```
## adult
## -----
## Center: -0.135166702792218
## Standard Deviation: 0.481469072370277
## Lower 95% Confidence Interval: -1.07884608463796
## Upper 95% Confidence Interval: 0.808512679053524
```





```
##
## Cluster Whithinness: 11122.7847934064 10237.0217657893 18304.1104205402 14996.9611695742 6190.420127
##
## Total Whithinness: 170419.12158895
##
## Cluster Betweenness: 113296.87841105
```