

## Supplementary File

### Tables

**Table AT01 – Word Count Statistics**

Minimum Words	1
Maximum Words	61
Mean Words	10.94
Median Words	10.00
Standard Deviation	5.47
25th Percentile (Q1)	7.00
75th Percentile (Q3)	13.00

**Table AT02 – Additional Dataset Information**

Year Range	2011 - 2021
Number of Unique Years	11
Date Range (created_at)	2011-01-26 to 2021-01-28
Number of Unique Users	196,905
Total Characters (all text)	28,093,613
Total Words (all text)	3,670,099

**Table AT03**

Topic 0	Term-Topic Weights
holocaust remembrance	4.9331
remembrance	4.9247
remembrance day	4.8664
day	3.7808
international holocaust	3.7033
international	3.6412
holocaust	1.8237
statement	0.9277

statement international	0.8268
today international	0.7731
mark international	0.4991
mark	0.4544
january	0.4510
realdonaldtrump	0.3283
weremember	0.3161
day realdonaldtrump	0.3100
today	0.3067
trump	0.2993
wednesday mark	0.2831
wednesday	0.2798

Topic 1	Term-Topic Weights
memorial	5.0861
holocaust memorial	5.0693
memorial day	4.8728
day	3.3755
holocaust	1.7544
marked	0.3999
mark holocaust	0.3969
day marked	0.3925
mark	0.3473
today holocaust	0.3353
event	0.3295
service	0.2366
ceremony	0.2340
news	0.2177
forget	0.1990
bbc	0.1964
today	0.1950
genocide	0.1881
day today	0.1688
day ceremony	0.1670

Topic 2	Term-Topic Weights
survivor	5.7893
holocaust survivor	5.2150
holocaust	1.7885
story	0.8676
holocaustmemorialday	0.5257
auschwitz	0.4709
news	0.4641
year	0.4385
israel	0.4158
say	0.3957
amp	0.3838
life	0.3614
tell	0.3488
survivor holocaust	0.3446
hate	0.3273
israeli	0.3069
poverty	0.3054
speech	0.3020
live	0.2947
share	0.2943

Topic 3	Term-Topic Weights
victim	3.6886
remember	2.6665
victim holocaust	2.6011
million	1.6665
holocaustmemorialday	1.5061
holocaust	1.3771
memory	1.3092
amp	1.0906
today	0.9889
memory victim	0.9547

holocaust victim	0.9297
commemoration	0.9013
jew	0.8887
genocide	0.8411
day commemoration	0.8375
weremember	0.8001
commemoration memory	0.7942
international day	0.7918
forget	0.7528
remember holocaust	0.7491

Topic 4	Term-Topic Weights
auschwitz	4.3014
liberation	3.3533
anniversary	2.6108
liberation auschwitz	2.2501
anniversary liberation	1.7788
mark	1.1843
year	1.1641
70th	1.1534
camp	1.1395
70th anniversary	1.1081
birkenau	1.0302
auschwitz liberation	1.0208
auschwitz birkenau	1.0166
75th	0.6561
concentration	0.6404
anniversary auschwitz	0.6385
75th anniversary	0.6109
year liberation	0.5892
concentration camp	0.5863
survivor mark	0.5480

Topic 5	Term-Topic Weights
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today	4.7634
today holocaust	4.0571
united state	1.1875
united	1.1689
state	1.1496
survivor living	1.1381
living united	1.1365
living	1.1184
day survivor	1.1153
state continue	1.0882
continue	1.0568
continue cnn	1.0486
cnn	1.0249
day	0.6357
remembrance day	0.5312
remembrance	0.5178
holocaust remembrance	0.4989
day today	0.4683
today international	0.4321
remember	0.3318

Topic 6	Term-Topic Weights
yad	2.9019
vashem	2.9010
yad vashem	2.8975
iremember	2.6095
holocaust victim	1.6187
commemorate holocaust	1.4555
wall	1.4110
iremember wall	1.4080
wall commemorate	1.3830
join yad	1.3805
commemorate	1.3750
vashem iremember	1.3683

join	1.2798
victim	1.1510
database	1.1305
victim yad	1.1237
shoah database	1.1187
vashem shoah	1.1168
shoah	1.0622
google	0.3058

Topic 7	Term-Topic Weights
world	2.4239
remembers	2.1771
remembers holocaust	2.1588
world remembers	1.9038
pay homage	1.4419
homage	1.4397
survivor pay	1.4142
auschwitz survivor	1.4023
pay	1.3820
homage world	1.3542
jew	1.1752
trump	1.0851
mark holocaust	1.0519
auschwitz	0.9586
mark	0.9302
rising	0.7158
amid	0.7060
sign	0.6649
jew holocaust	0.6625
holocaust	0.6522

Topic 8	Term-Topic Weights
people	3.2639
jewish	2.3946

story	2.1183
jewish people	2.0439
saved	1.8398
muslim	1.8018
people holocaust	1.7463
muslim saved	1.7143
story muslim	1.6803
saved jewish	1.6231
forgotten story	1.5901
forgotten	1.5111
jew	1.1029
nazi	0.6285
million	0.6185
jew holocaust	0.4794
killed	0.4017
time	0.3097
people killed	0.2827
saved jew	0.2675

Topic 9	Term-Topic Weights
holocaust	6.4864
museum	1.1050
holocaust museum	0.9648
video	0.5796
denier	0.5045
holocaust denier	0.4812
forget	0.4495
liked	0.4319
banned holocaust	0.4208
banned	0.4027
history	0.4003
liked video	0.3995
israel	0.3700
video banned	0.3680

iran	0.3628
holocaustmemorialday	0.3364
denial	0.3257
holocaust denial	0.2997
like	0.2894
new	0.2870

**Table AT04**

Topic distribution	Number of documents
Topic 0	50267 documents (15.0%)
Topic 1	49351 documents (14.7%)
Topic 2	29928 documents (8.9%)
Topic 3	47238 documents (14.1%)
Topic 4	19751 documents (5.9%)
Topic 5	15508 documents (4.6%)
Topic 6	3781 documents (1.1%)
Topic 7	17629 documents (5.3%)
Topic 8	23045 documents (6.9%)
Topic 9	78937 documents (23.5%)

**Table AT05**

Hyperparameter	Value Description
n_components	10 Number of topics
random_state	42 Random seed
max_iter	300 Maximum iterations
l1_ratio	0.5 Regularization mix (0=L2 only, 1=L1 only)
init	'nndsvd' Initialization method
solver	'mu' Optimization algorithm

## Figures

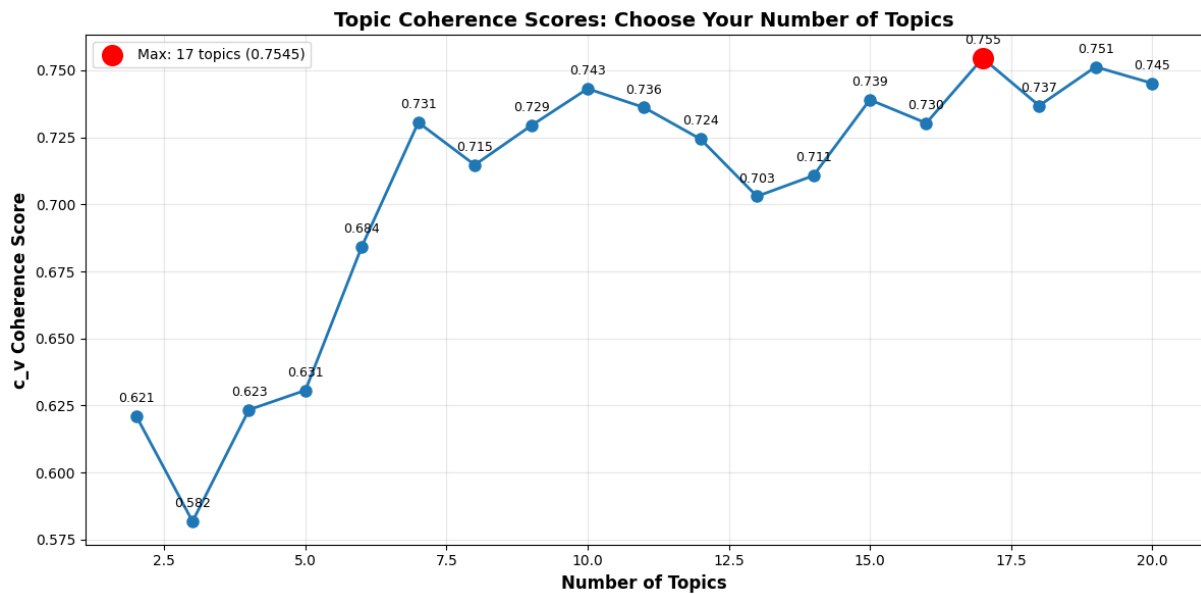


Figure AF01 – Coherence scores for topic models from two to 20

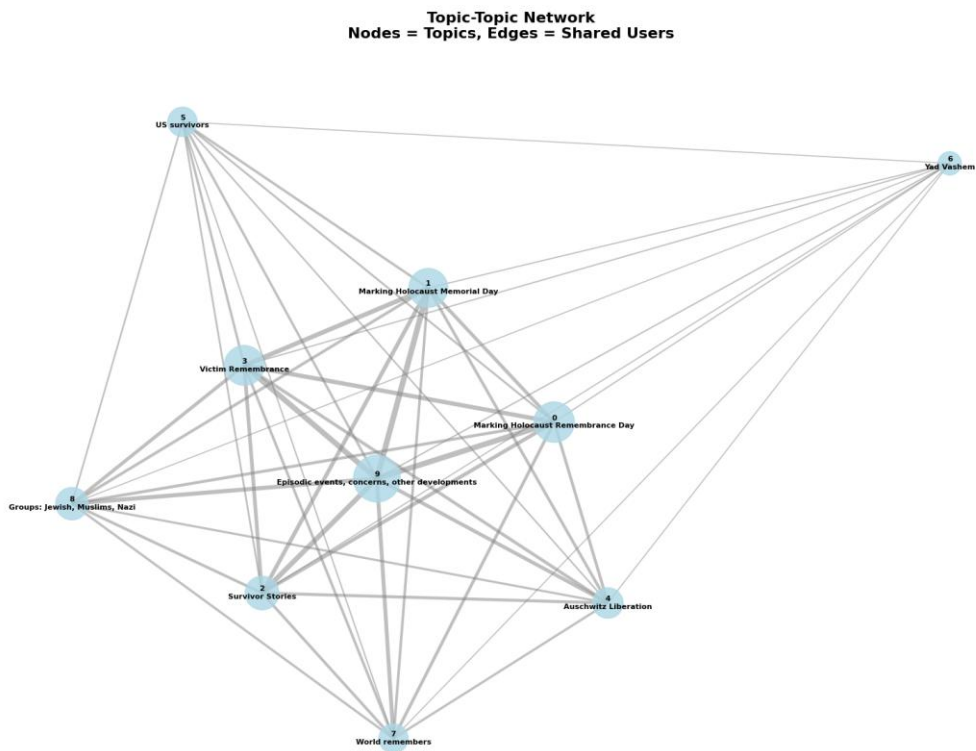


Figure AF02 – Network graph for user connectedness over topics

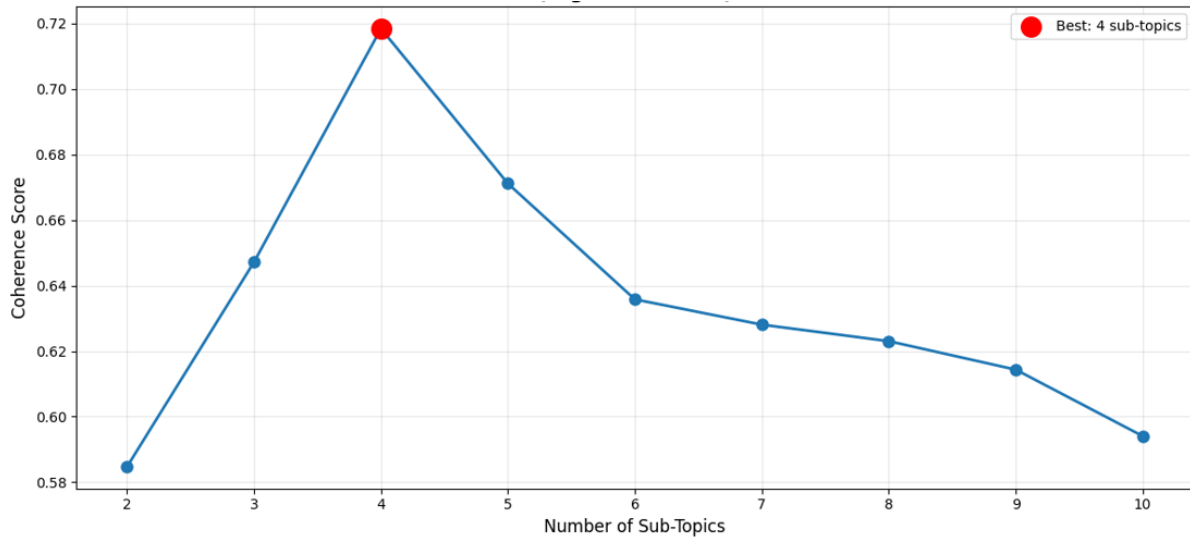


Figure AF03 – Coherence scores for sub-topic models from two to 10

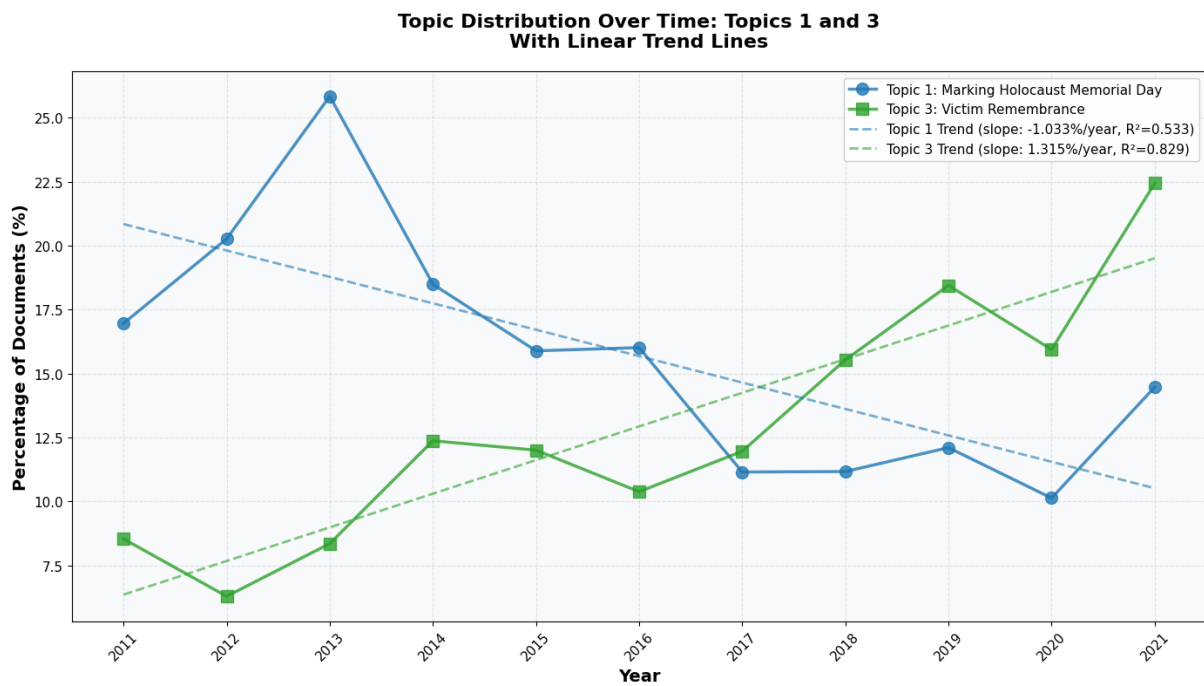


Figure AF04 – Trend lines for Topic 1 (decreasing relevance) and 3 (increasing relevance)