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Topic Modeling for GrassRoot Campaigns: Homelessness

Nextdoor.com content pertaining to homelessness by neighborhood in east Denver.

(Re)-Institutionalizing 1955-1994

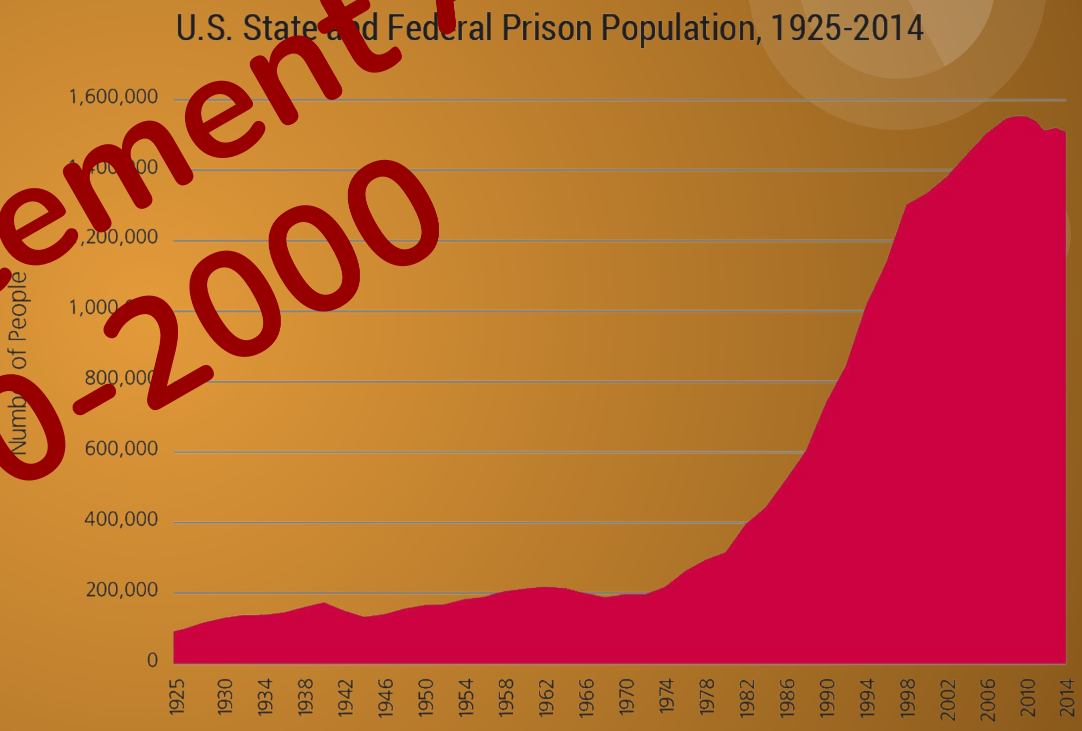
Law Enforcement Acts 1990-2000

1955

- < 200,000 incarcerated
- > 500,000 mental patients
- 0.3% of pop. Mentally Ill (> 1.1 million in 2020)

2020

- > 2.1 million incarcerated
- < 10 beds per 100,000 ppl
- 15% of pop. Mentally Ill (> 51.5 million)

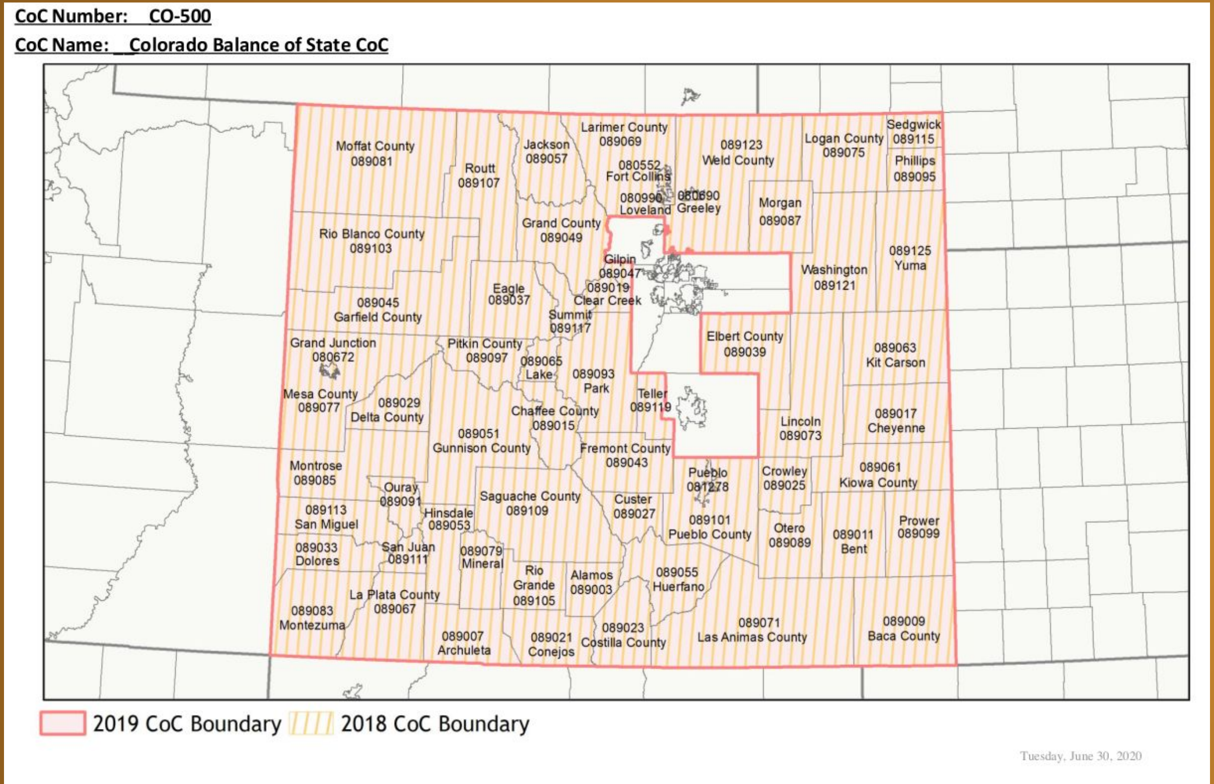


Source: Bureau of Justice Statistics *Prisoners Series.*

THE SENTENCING PROJECT

https://www.vera.org/downloads/publications/people-in-jail-and-prison-in-2020.pdf


TOW-AWAY
NO STOPPING
ANY TIME



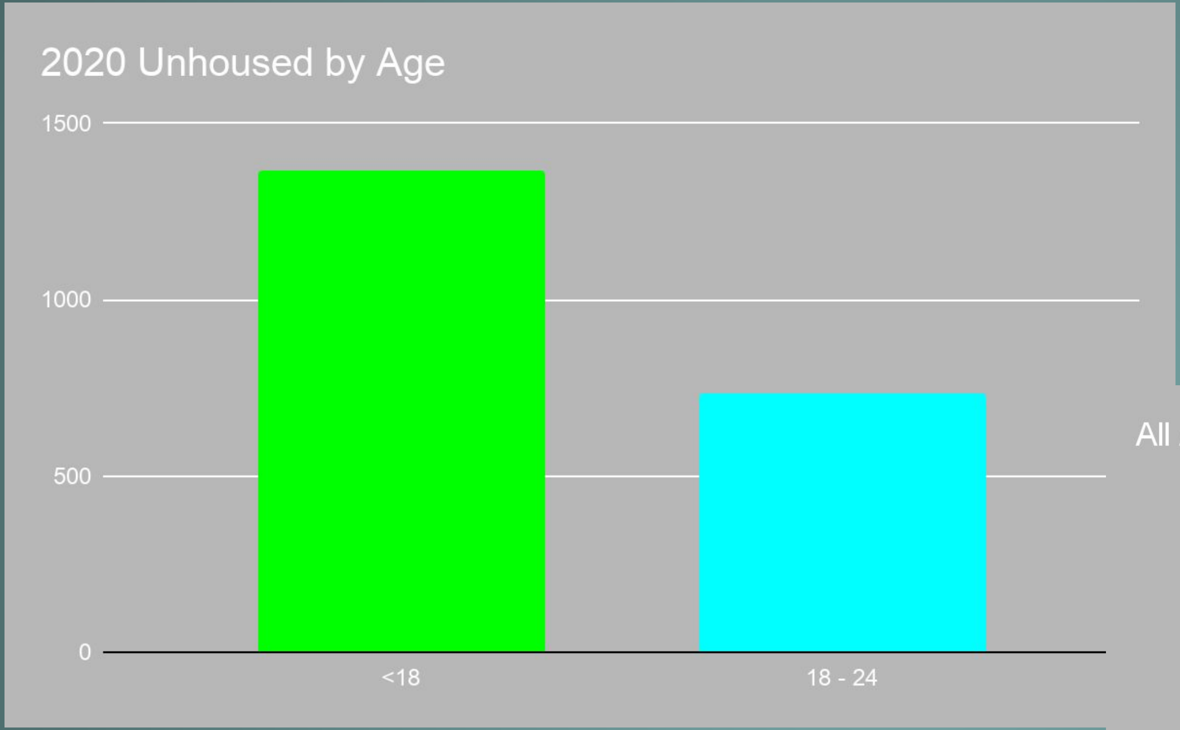
Continuum Of Care:

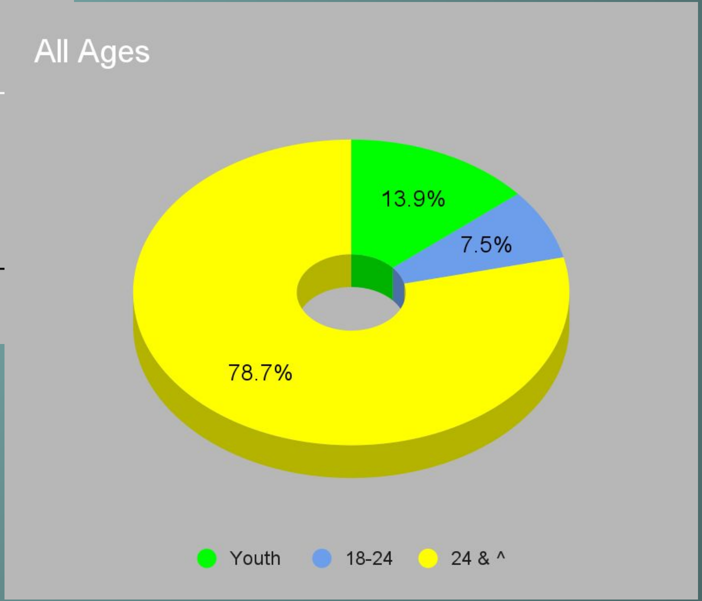
National Annual Homeless Population & Housing Inventory Report.

Ways to Improve?

- Existing Partnerships
- Self Reporting
- Seasonal Count
- Senior Data

https://www.hudexchange.info/programs/coc/coc-homeless-populations-and-subpopulations-reports/


2020 Unhoused by Age
1500
1000
500
0
<18
18 - 24


All Ages
13.9%
7.5%
78.7%
Youth
18-24
24 & ^


PLESE
HELP
God Bless

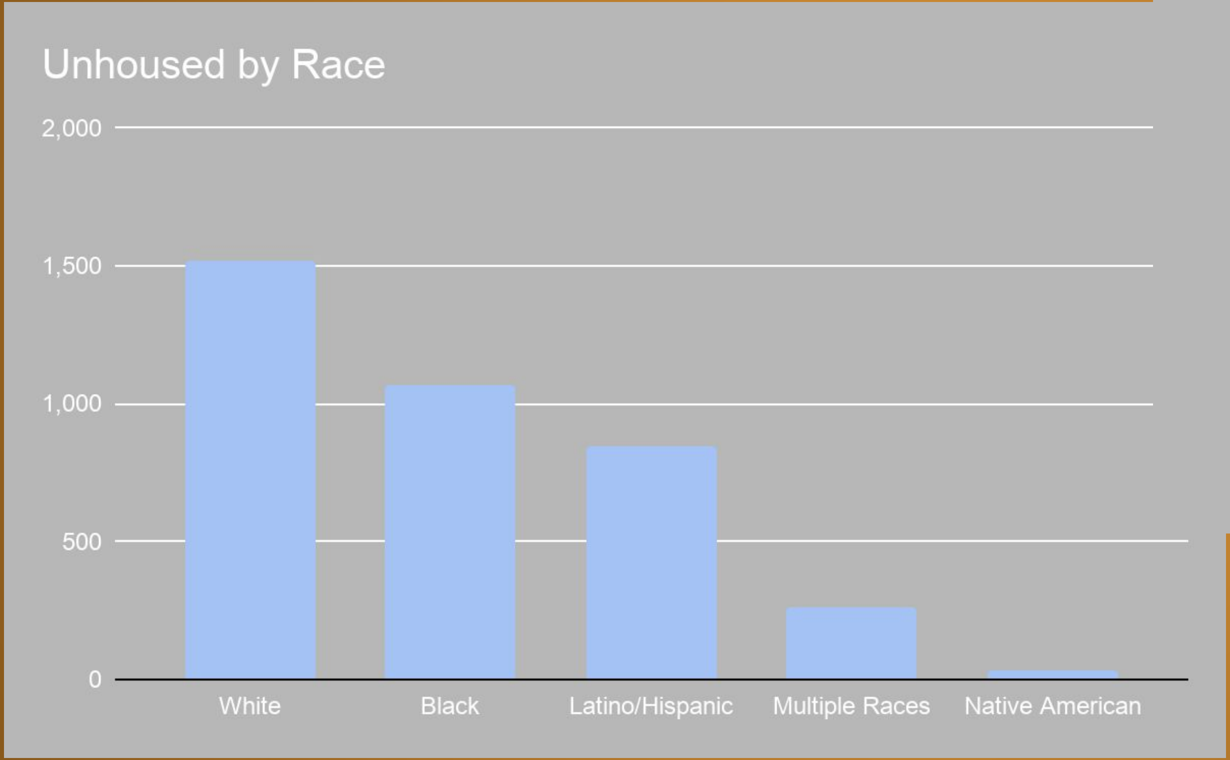

Iraq Veteran
Proof of Service
P.T.S.D.
20 Months Sober
In Need Of:
7 Month Old Baby Boy
VA NOT Helping
Severly Struggling
Anything Helps! God Bless
Need 2nd Job

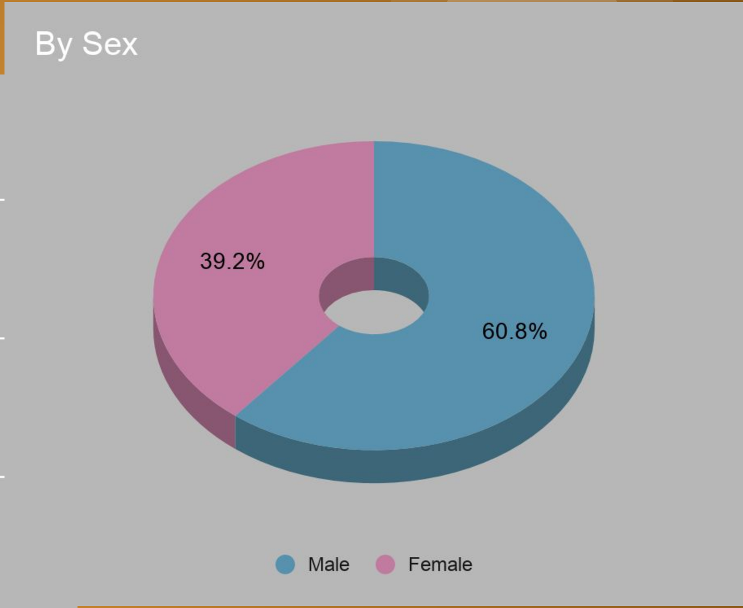

HOMELESS VET
SUPPORT YOUR
TROOPS

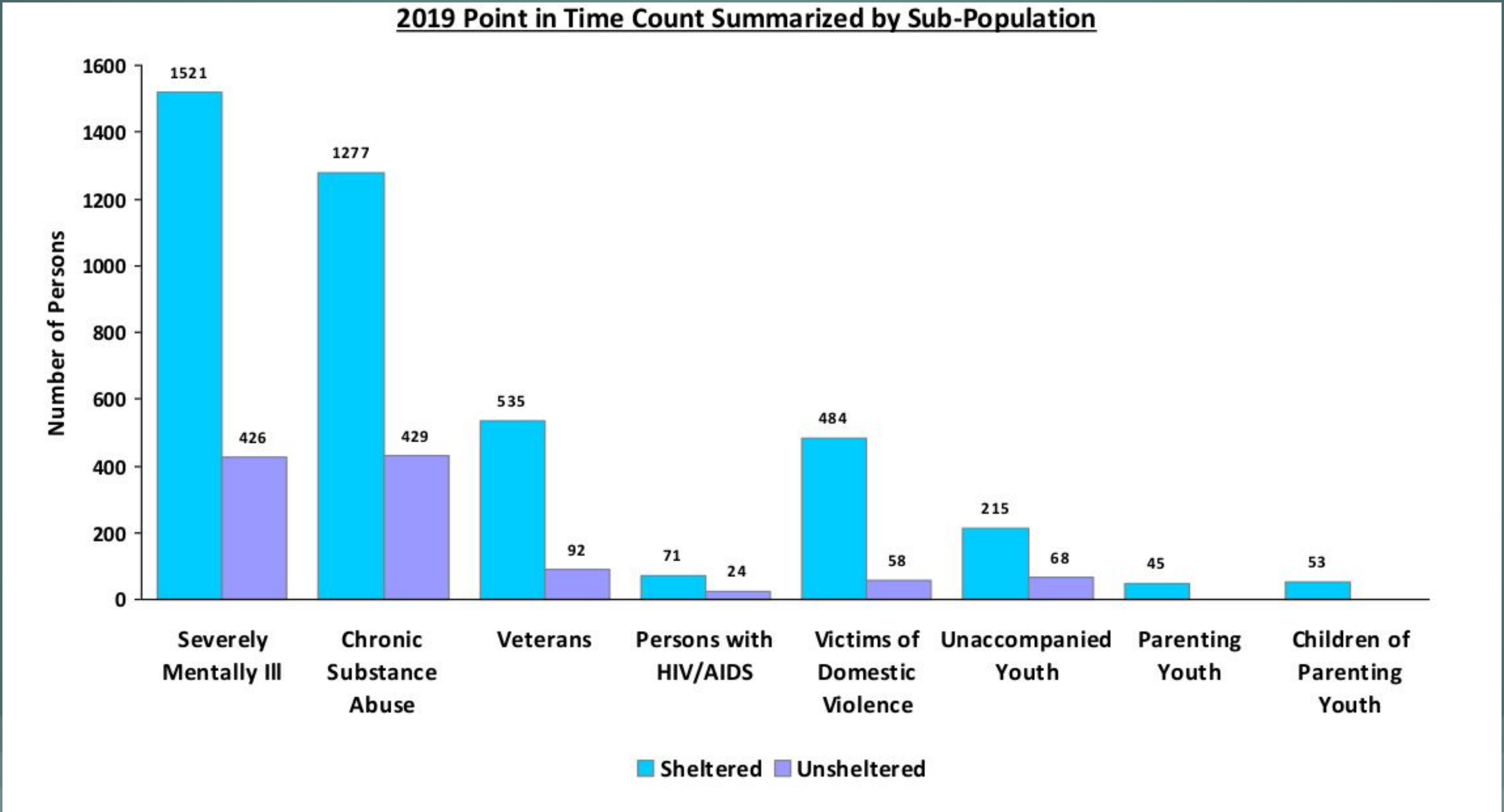

HOMELESS
PLEASE
HELP

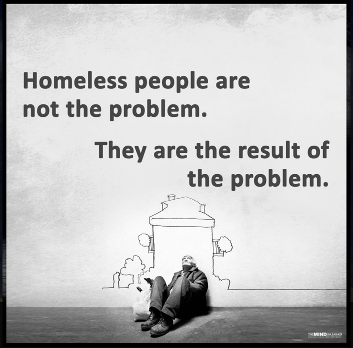
10,000 Unhoused in Colorado

Who are they ?






2019 Point in Time Count Summarized by Sub-Population
Number of Persons
1600
1400
1200
1000
800
600
400
200
0
1521
426
1277
429
535
92
71
24
484
58
215
68
45
53
Severely Mentally Ill
Chronic Substance Abuse
Veterans
Persons with HIV/AIDS
Victims of Domestic Violence
Unaccompanied Youth
Parenting Youth
Children of Parenting Youth
Sheltered
Unsheltered



Seven out of 10 Americans are one paycheck away from being homeless.

(Pras Michel)

- Urban Camping Ban
- Anti-affordable Housing Legislation
- Tourism Real Estate

Homeless Tent City in North Park Hill? When were we able to voice our say on this? To whom it may concern (and it should concern everyone) in our wonderful North Park Hill neighborhood:

I was literally floored and became sick to my stomach once I heard the news that
Was just presented to me by a friend. Honestly I can't see how this location would be considered an appropriate location for housing homeless population. This was apparently approved "under the radar" and was in the works without many knowing about it! Question: Who is going to police this and keep our children's safety top priority? Who is going to keep the area sanitized and clean of debris that we already see all over the city where these tent cities currently exist? Not to mention our property values will likely diminish as a result of this horrible decision......

Where I live, we have a different problem. Most of the people in the street tents are mostly young men (and some women) who are hard core drug addicts who do heroin and meth all day. I have never seen a single child in any of these tents in our neighborhood, and I see them in the alley right outside my bedroom window every day. I also met with the Denver Police this week, and the police confirmed they are "service resistant" people meaning that they are offered mental health, drug treatment, and housing support every day and they refuse. They instead want the "freedom" to live in a tent, do drugs, and not have to change. People (many from churches) bring them food to eat every day. I saw a van full of nuns do this last week. The drug tents remain in neighborhoods who are terrorized by these people every day with open drug use, public deification, completely blocked sidewalks, urination, stolen bicycles, car theft, prostitution, yelling in the middle of the night, etc.. I have been the victim of this crime with 7 of these illegal drug tent "communities" within 1 block of me for over the last year. Trust me, you do not want to have to live with this! Last year someone was stabbed right on my block next to a child care center in daylight hours.

Who is going to clean up? The squatter camp has disappeared in the night. I'm glad. This wasn't the place for it. Now I'm wondering which neighbor who talked about homeless rights is going to clean up the mess left behind? With rights come responsibility.

Housing Assistance? Hi neighbors. There is an older gentleman in our neighborhood who is losing his home that he has been renting for 13 years because it has been purchased by developers. This is happening while he is going through chemotherapy. Since he is in no shape to actively find housing and has no family, I am trying to help. Who has a lead for an emergency situation like this? Thanks in advance for any help you can provide.

Extreme Need for the Homeless. Helping Hands for the Homeless Denver is hosting it's monthly event on the 16th. We will be serving a full baked potato bar, fruit and more. We are collecting donations of the most needed items beforehand.

We are running extremely low on the following:
Blankets
Jackets
Hygiene products (soap,shampoo, conditioner, toothpaste, toothbrushes, deodorant,Combs)
Hand/foot warmers

If you have any items that you no longer need or use and would be willing to donate to the homeless, please let me know.

It's very hard for someone living on the streets and the cold is not ones friend. We take most items (including some furniture) and it gets distributed to those on the streets and those getting just into a home (furniture, etc).
For a full list of items we can use for those on the street, I will post them in the comments.

Machine Learning Tools to Change the Narrative:

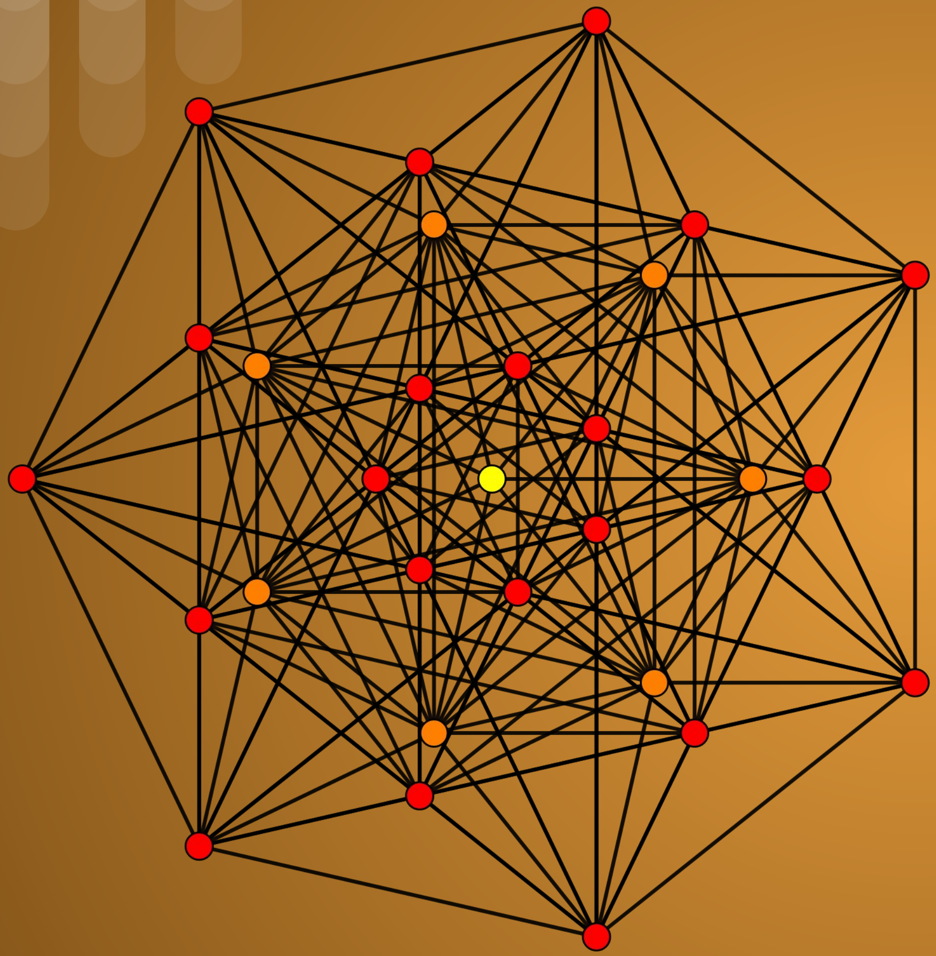
Can NLP Help Our Communities Heal?

- Selenium
    - Web Scraping JavaScript.
- Nextdoor.com
    - Community focused Social Media Outlet.
- Spacy
    - English Word Embeddings
- Latent Dirichlet Allocations
    - Topic Modeling
- VADAR
    - Sentiment Content Analysis
- Text2Emotions
    - Emotional Content Analysis

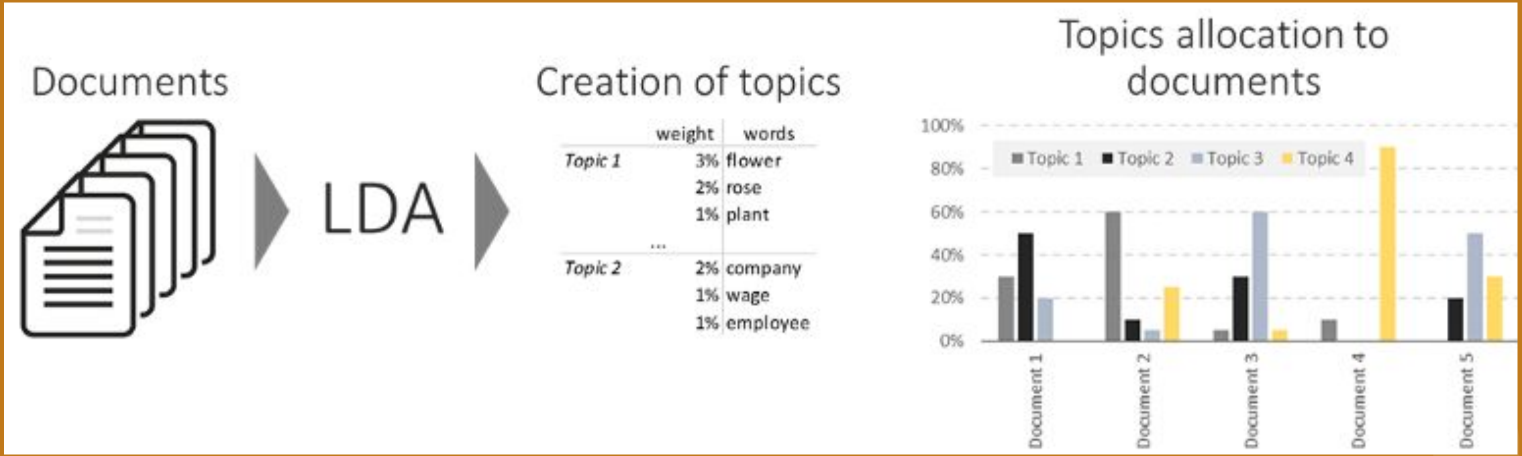
Web Scraping with Selenium.

- JavaScript Interactive
- Slow
- Semi- Supervised Scrape

Scrapy is a powerful pytorch library that is more flexible than BS4 and faster than Selenium. Pytorch would likely be the best tool for deploying a large scale web-scrape, and we looking forward to learning this tool in the future!



Latent Dirichlet Allocation


Documents
LDA
Creation of topics
weight words
Topic 1 3% flower
2% rose
1% plant
...
Topic 2 2% company
1% wage
1% employee
Topics allocation to documents
100%
80%
60%
40%
20%
0%
Topic 1
Topic 2
Topic 3
Topic 4
Document 1
Document 2
Document 3
Document 4
Document 5

Tuning Method 1:

		0.15	60.0	1.000000	0.323892	nan	0.323892	0.323892	0.323892	0.323892	0.323892
			80.0	1.000000	0.300338	nan	0.300338	0.300338	0.300338	0.300338	0.300338
			100.0	1.000000	0.345483	nan	0.345483	0.345483	0.345483	0.345483	0.345483
			20.0	1.000000	0.381161	nan	0.381161	0.381161	0.381161	0.381161	0.381161
			40.0	1.000000	0.340673	nan	0.340673	0.340673	0.340673	0.340673	0.340673
		0.44999999999999996	60.0	1.000000	0.406601	nan	0.406601	0.406601	0.406601	0.406601	0.406601
			80.0	1.000000	0.369714	nan	0.369714	0.369714	0.369714	0.369714	0.369714
	0.15		100.0	1.000000	0.355284	nan	0.355284	0.355284	0.355284	0.355284	0.355284
			20.0	1.000000	0.353633	nan	0.353633	0.353633	0.353633	0.353633	0.353633
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		0.7499999999999999	60.0	1.000000	0.388513	nan	0.388513	0.388513	0.388513	0.388513	0.388513
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		symmetric	60.0	1.000000	0.366746	nan	0.366746	0.366746	0.366746	0.366746	0.366746
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			40.0	1.000000	0.336904	nan	0.336904	0.336904	0.336904	0.336904	0.336904
		symmetric	60.0	1.000000	0.405288	nan	0.405288	0.405288	0.405288	0.405288	0.405288
			80.0	1.000000	0.405935	nan	0.405935	0.405935	0.405935	0.405935	0.405935
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		0.15	60.0	1.000000	0.359709	nan	0.359709	0.359709	0.359709	0.359709	0.359709
			80.0	1.000000	0.369674	nan	0.369674	0.369674	0.369674	0.369674	0.369674
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		0.44999999999999996	60.0	1.000000	0.399591	nan	0.399591	0.399591	0.399591	0.399591	0.399591
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			40.0	1.000000	0.346611	nan	0.346611	0.346611	0.346611	0.346611	0.346611
		symmetric	60.0	1.000000	0.382461	nan	0.382461	0.382461	0.382461	0.382461	0.382461
			80.0	1.000000	0.343470	nan	0.343470	0.343470	0.343470	0.343470	0.343470
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			20.0	1.000000	0.366269	nan	0.366269	0.366269	0.366269	0.366269	0.366269
			40.0	1.000000	0.357674	nan	0.357674	0.357674	0.357674	0.357674	0.357674
		0.15	60.0	1.000000	0.328369	nan	0.328369	0.328369	0.328369	0.328369	0.328369
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			100.0	1.000000	0.330749	nan	0.330749	0.330749	0.330749	0.330749	0.330749
			20.0	1.000000	0.391856	nan	0.391856	0.391856	0.391856	0.391856	0.391856
			40.0	1.000000	0.359577	nan	0.359577	0.359577	0.359577	0.359577	0.359577
		symmetric	60.0	1.000000	0.310773	nan	0.310773	0.310773	0.310773	0.310773	0.310773
			80.0	1.000000	0.254342	nan	0.254342	0.254342	0.254342	0.254342	0.254342
			100.0	1.000000	0.288869	nan	0.288869	0.288869	0.288869	0.288869	0.288869
			20.0	1.000000	0.326574	nan	0.326574	0.326574	0.326574	0.326574	0.326574
			40.0	1.000000	0.303213	nan	0.303213	0.303213	0.303213	0.303213	0.303213
		0.15	60.0	1.000000	0.322573	nan	0.322573	0.322573	0.322573	0.322573	0.322573
			80.0	1.000000	0.305345	nan	0.305345	0.305345	0.305345	0.305345	0.305345
			100.0	1.000000	0.337929	nan	0.337929	0.337929	0.337929	0.337929	0.337929
			20.0	1.000000	0.377640	nan	0.377640	0.377640	0.377640	0.377640	0.377640
			40.0	1.000000	0.350847	nan	0.350847	0.350847	0.350847	0.350847	0.350847
		0.44999999999999996	60.0	1.000000	0.350787	nan	0.350787	0.350787	0.350787	0.350787	0.350787
			80.0	1.000000	0.275903	nan	0.275903	0.275903	0.275903	0.275903	0.275903
			100.0	1.000000	0.317622	nan	0.317622	0.317622	0.317622	0.317622	0.317622
	0.44999999999999996		20.0	1.000000	0.405571	nan	0.405571	0.405571	0.405571	0.405571	0.405571
			40.0	1.000000	0.338671	nan	0.338671	0.338671	0.338671	0.338671	0.338671
		0.7499999999999999	60.0	1.000000	0.332066	nan	0.332066	0.332066	0.332066	0.332066	0.332066
			80.0	1.000000	0.293731	nan	0.293731	0.293731	0.293731	0.293731	0.293731
			100.0	1.000000	0.322220	nan	0.322220	0.322220	0.322220	0.322220	0.322220
			20.0	1.000000	0.386802	nan	0.386802	0.386802	0.386802	0.386802	0.386802
			40.0	1.000000	0.361794	nan	0.361794	0.361794	0.361794	0.361794	0.361794
		symmetric	60.0	1.000000	0.350787	nan	0.350787	0.350787	0.350787	0.350787	0.350787
			80.0	1.000000	0.275903	nan	0.275903	0.275903	0.275903	0.275903	0.275903
			100.0	1.000000	0.317622	nan	0.317622	0.317622	0.317622	0.317622	0.317622
			20.0	1.000000	0.358336	nan	0.358336	0.358336	0.358336	0.358336	0.358336
			40.0	1.000000	0.372264	nan	0.372264	0.372264	0.372264	0.372264	0.372264
		0.15	60.0	1.000000	0.342013	nan	0.342013	0.342013	0.342013	0.342013	0.342013
			80.0	1.000000	0.351274	nan	0.351274	0.351274	0.351274	0.351274	0.351274
			100.0	1.000000	0.317448	nan	0.317448	0.317448	0.317448	0.317448	0.317448
			20.0	1.000000	0.400166	nan	0.400166	0.400166	0.400166	0.400166	0.400166
			40.0	1.000000	0.337832	nan	0.337832	0.337832	0.337832	0.337832	0.337832
		0.44999999999999996	60.0	1.000000	0.362632	nan	0.362632	0.362632	0.362632	0.362632	0.362632
			80.0	1.000000	0.292239	nan	0.292239	0.292239	0.292239	0.292239	0.292239
			100.0	1.000000	0.319440	nan	0.319440	0.319440	0.319440	0.319440	0.319440
2	0.7499999999999999		20.0	1.000000	0.377369	nan	0.377369	0.377369	0.377369	0.377369	0.377369
			40.0	1.000000	0.337832	nan	0.337832	0.337832	0.337832	0.337832	0.337832
		0.7499999999999999	60.0	1.000000	0.342013	nan	0.342013	0.342013	0.342013	0.342013	0.342013
			80.0	1.000000	0.337840	nan	0.337840	0.337840	0.337840	0.337840	0.337840
			100.0	1.000000	0.339097	nan	0.339097	0.339097	0.339097	0.339097	0.339097
			20.0	1.000000	0.400166	nan	0.400166	0.400166	0.400166	0.400166	0.400166
			40.0	1.000000	0.337832	nan	0.337832	0.337832	0.337832	0.337832	0.337832
		symmetric	60.0	1.000000	0.362632	nan	0.362632	0.362632	0.362632	0.362632	0.362632
			80.0	1.000000	0.296680	nan	0.296680	0.296680	0.296680	0.296680	0.296680
			100.0	1.000000	0.319440	nan	0.319440	0.319440	0.319440	0.319440	0.319440
			20.0	1.000000	0.396326	nan	0.396326	0.396326	0.396326	0.396326	0.396326
			40.0	1.000000	0.342767	nan	0.342767	0.342767	0.342767	0.342767	0.342767
		0.15	60.0	1.000000	0.361533	nan	0.361533	0.361533	0.361533	0.361533	0.361533
			80.0	1.000000	0.373590	nan	0.373590	0.373590	0.373590	0.373590	0.373590
			100.0	1.000000	0.357975	nan	0.357975	0.357975	0.357975	0.357975	0.357975
			20.0	1.000000	0.343009	nan	0.343009	0.343009	0.343009	0.343009	0.343009
			40.0	1.000000	0.361255	nan	0.361255	0.361255	0.361255	0.361255	0.361255
		0.44999999999999996	60.0	1.000000	0.385915	nan	0.385915	0.385915	0.385915	0.385915	0.385915
			80.0	1.000000	0.365420	nan	0.365420	0.365420	0.365420	0.365420	0.365420
			100.0	1.000000	0.373371	nan	0.373371	0.373371	0.373371	0.373371	0.373371
	asymmetric		20.0	1.000000	0.331712	nan	0.331712	0.331712	0.331712	0.331712	0.331712
			40.0	1.000000	0.357552	nan	0.357552	0.357552	0.357552	0.357552	0.357552
		0.7499999999999999	60.0	1.000000	0.389687	nan	0.389687	0.389687	0.389687	0.389687	0.389687
			80.0	1.000000	0.383924	nan	0.383924	0.383924	0.383924	0.383924	0.383924
			100.0	1.000000	0.369768	nan	0.369768	0.369768	0.369768	0.369768	0.369768
			20.0	1.000000	0.329937	nan	0.329937	0.329937	0.329937	0.329937	0.329937
			40.0	1.000000	0.368118	nan	0.368118	0.368118	0.368118	0.368118	0.368118
		symmetric	60.0	1.000000	0.385915	nan	0.385915	0.385915	0.385915	0.385915	0.385915
			80.0	1.000000	0.374661	nan	0.374661	0.374661	0.374661	0.374661	0.374661
			100.0	1.000000	0.367178	nan	0.367178	0.367178	0.367178	0.367178	0.367178
			20.0	1.000000	0.332081	nan	0.332081	0.332081	0.332081	0.332081	0.332081
			40.0	1.000000	0.275870	nan	0.275870	0.275870	0.275870	0.275870	0.275870
		0.15	60.0	1.000000	0.341591	nan	0.341591	0.341591	0.341591	0.341591	0.341591
			80.0	1.000000	0.328328	nan	0.328328	0.328328	0.328328	0.328328	0.328328
			100.0	1.000000	0.337929	nan	0.337929	0.337929	0.337929	0.337929	0.337929
			20.0	1.000000	0.377640	nan	0.377640	0.377640	0.377640	0.377640	0.377640
			40.0	1.000000	0.337832	nan	0.337832	0.337832	0.337832	0.337832	0.337832
		0.44999999999999996	60.0	1.000000	0.326073	nan	0.326073	0.326073	0.326073	0.326073	0.326073
			80.0	1.000000	0.275903	nan	0.275903	0.275903	0.275903	0.275903	0.275903

		0.44999999999999996	60.0	1.000000	0.461509	nan	0.461509	0.461509	0.461509	0.461509	0.461509
			80.0	1.000000	0.417009	nan	0.417009	0.417009	0.417009	0.417009	0.417009
			100.0	1.000000	0.417682	nan	0.417682	0.417682	0.417682	0.417682	0.417682
	0.15		20.0	1.000000	0.376666	nan	0.376666	0.376666	0.376666	0.376666	0.376666
			40.0	1.000000	0.461348	nan	0.461348	0.461348	0.461348	0.461348	0.461348
		0.7499999999999999	60.0	1.000000	0.402176	nan	0.402176	0.402176	0.402176	0.402176	0.402176
			80.0	1.000000	0.435175	nan	0.435175	0.435175	0.435175	0.435175	0.435175
			100.0	1.000000	0.416412	nan	0.416412	0.416412	0.416412	0.416412	0.416412
			20.0	1.000000	0.333690	nan	0.333690	0.333690	0.333690	0.333690	0.333690
			40.0	1.000000	0.382520	nan	0.382520	0.382520	0.382520	0.382520	0.382520
		symmetric	60.0	1.000000	0.348469	nan	0.348469	0.348469	0.348469	0.348469	0.348469
			80.0	1.000000	0.288042	nan	0.288042	0.288042	0.288042	0.288042	0.288042
			100.0	1.000000	0.317811	nan	0.317811	0.317811	0.317811	0.317811	0.317811
			20.0	1.000000	0.340722	nan	0.340722	0.340722	0.340722	0.340722	0.340722
			40.0	1.000000	0.327592	nan	0.327592	0.327592	0.327592	0.327592	0.327592
		0.15	60.0	1.000000	0.397824	nan	0.397824	0.397824	0.397824	0.397824	0.397824
			80.0	1.000000	0.370170	nan	0.370170	0.370170	0.370170	0.370170	0.370170
			100.0	1.000000	0.370540	nan	0.370540	0.370540	0.370540	0.370540	0.370540
			20.0	1.000000	0.330663	nan	0.330663	0.330663	0.330663	0.330663	0.330663
			40.0	1.000000	0.373694	nan	0.373694	0.373694	0.373694	0.373694	0.373694
		0.44999999999999996	60.0	1.000000	0.447658	nan	0.447658	0.447658	0.447658	0.447658	0.447658
			80.0	1.000000	0.517571	nan	0.517571	0.517571	0.517571	0.517571	0.517571
			100.0	1.000000	0.424557	nan	0.424557	0.424557	0.424557	0.424557	0.424557
	0.44999999999999996		20.0	1.000000	0.389247	nan	0.389247	0.389247	0.389247	0.389247	0.389247
			40.0	1.000000	0.448045	nan	0.448045	0.448045	0.448045	0.448045	0.448045
		0.7499999999999999	60.0	1.000000	0.392160	nan	0.392160	0.392160	0.392160	0.392160	0.392160
			80.0	1.000000	0.450202	nan	0.450202	0.450202	0.450202	0.450202	0.450202
			100.0	1.000000	0.457136	nan	0.457136	0.457136	0.457136	0.457136	0.457136
			20.0	1.000000	0.349569	nan	0.349569	0.349569	0.349569	0.349569	0.349569
			40.0	1.000000	0.316492	nan	0.316492	0.316492	0.316492	0.316492	0.316492
		symmetric	60.0	1.000000	0.400616	nan	0.400616	0.400616	0.400616	0.400616	0.400616
			80.0	1.000000	0.364959	nan	0.364959	0.364959	0.364959	0.364959	0.364959
			100.0	1.000000	0.347611	nan	0.347611	0.347611	0.347611	0.347611	0.347611
			20.0	1.000000	0.321127	nan	0.321127	0.321127	0.321127	0.321127	0.321127
			40.0	1.000000	0.322687	nan	0.322687	0.322687	0.322687	0.322687	0.322687
		0.15	60.0	1.000000	0.382642	nan	0.382642	0.382642	0.382642	0.382642	0.382642
			80.0	1.000000	0.361402	nan	0.361402	0.361402	0.361402	0.361402	0.361402
			100.0	1.000000	0.381403	nan	0.381403	0.381403	0.381403	0.381403	0.381403
			20.0	1.000000	0.393556	nan	0.393556	0.393556	0.393556	0.393556	0.393556
			40.0	1.000000	0.392295	nan	0.392295	0.392295	0.392295	0.392295	0.392295
		0.44999999999999996	60.0	1.000000	0.406273	nan	0.406273	0.406273	0.406273	0.406273	0.406273
			80.0	1.000000	0.457199	nan	0.457199	0.457199	0.457199	0.457199	0.457199
6	0.7499999999999999		100.0	1.000000	0.388735	nan	0.388735	0.388735	0.388735	0.388735	0.388735
			20.0	1.000000	0.440753	nan	0.440753	0.440753	0.440753	0.440753	0.440753
			40.0	1.000000	0.417063	nan	0.417063	0.417063	0.417063	0.417063	0.417063
		0.7499999999999999	60.0	1.000000	0.436257	nan	0.436257	0.436257	0.436257	0.436257	0.436257
			80.0	1.000000	0.477596	nan	0.477596	0.477596	0.477596	0.477596	0.477596
			100.0	1.000000	0.400870	nan	0.400870	0.400870	0.400870	0.400870	0.400870
			20.0	1.000000	0.326560	nan	0.326560	0.326560	0.326560	0.326560	0.326560
			40.0	1.000000	0.314797	nan	0.314797	0.314797	0.314797	0.314797	0.314797
		symmetric	60.0	1.000000	0.398518	nan	0.398518	0.398518	0.398518	0.398518	0.398518
			80.0	1.000000	0.367265	nan	0.367265	0.367265	0.367265	0.367265	0.367265
			100.0	1.000000	0.400008	nan	0.400008	0.400008	0.400008	0.400008	0.400008
			20.0	1.000000	0.349192	nan	0.349192	0.349192	0.349192	0.349192	0.349192
			40.0	1.000000	0.359894	nan	0.359894	0.359894	0.359894	0.359894	0.359894
		0.15	60.0	1.000000	0.350786	nan	0.350786	0.350786	0.350786	0.350786	0.350786
			80.0	1.000000	0.328428	nan	0.328428	0.328428	0.328428	0.328428	0.328428
			100.0	1.000000	0.347324	nan	0.347324	0.347324	0.347324	0.347324	0.347324
			20.0	1.000000	0.405275	nan	0.405275	0.405275	0.405275	0.405275	0.405275
			40.0	1.000000	0.420216	nan	0.420216	0.420216	0.420216	0.420216	0.420216
		0.44999999999999996	60.0	1.000000	0.477198	nan	0.477198	0.477198	0.477198	0.477198	0.477198
			80.0	1.000000	0.376255	nan	0.376255	0.376255	0.376255	0.376255	0.376255
			100.0	1.000000	0.399059	nan	0.399059	0.399059	0.399059	0.399059	0.399059
	asymmetric		20.0	1.000000	0.413201	nan	0.413201	0.413201	0.413201	0.413201	0.413201
			40.0	1.000000	0.387262	nan	0.387262	0.387262	0.387262	0.387262	0.387262
		0.7499999999999999	60.0	1.000000	0.402604	nan	0.402604	0.402604	0.402604	0.402604	0.402604
			80.0	1.000000	0.405098	nan	0.405098	0.405098	0.405098	0.405098	0.405098
			100.0	1.000000	0.442941	nan	0.442941	0.442941	0.442941	0.442941	0.442941
			20.0	1.000000	0.342344	nan	0.342344	0.342344	0.342344	0.342344	0.342344
			40.0	1.000000	0.368523	nan	0.368523	0.368523	0.368523	0.368523	0.368523
		symmetric	60.0	1.000000	0.328731	nan	0.328731	0.328731	0.328731	0.328731	0.328731
			80.0	1.000000	0.330031	nan	0.330031	0.330031	0.330031	0.330031	0.330031
			100.0	1.000000	0.356746	nan	0.356746	0.356746	0.356746	0.356746	0.356746
			20.0	1.000000	0.309033	nan	0.309033	0.309033	0.309033	0.309033	0.309033
			40.0	1.000000	0.379208	nan	0.379208	0.379208	0.379208	0.379208	0.379208
		0.15	60.0	1.000000	0.394436	nan	0.394436	0.394436	0.394436	0.394436	0.394436
			80.0	1.000000	0.288583	nan	0.288583	0.288583	0.288583	0.288583	0.288583
			100.0	1.000000	0.308514	nan	0.308514	0.308514	0.308514	0.308514	0.308514
			20.0	1.000000	0.344274	nan	0.344274	0.344274	0.344274	0.344274	0.344274
			40.0	1.000000	0.442651	nan	0.442651	0.442651	0.442651	0.442651	0.442651
		0.44999999999999996	60.0	1.000000	0.449681	nan	0.449681	0.449681	0.449681	0.449681	0.449681
			80.0	1.000000	0.431728	nan	0.431728	0.431728	0.431728	0.431728	0.431728
			100.0	1.000000	0.403650	nan	0.403650	0.403650	0.403650	0.403650	0.403650
	symmetric		20.0	1.000000	0.380139	nan	0.380139	0.380139	0.380139	0.380139	0.380139
			40.0	1.000000	0.475005	nan	0.475005	0.475005	0.475005	0.475005	0.475005
		0.7499999999999999	60.0	1.000000	0.396603	nan	0.396603	0.396603	0.396603	0.396603	0.396603
			80.0	1.000000	0.428087	nan	0.428087	0.428087	0.428087	0.428087	0.428087
			100.0	1.000000	0.397248	nan	0.397248	0.397248	0.397248	0.397248	0.397248
			20.0	1.000000	0.337077	nan	0.337077	0.337077	0.337077	0.337077	0.337077
			40.0	1.000000	0.391652	nan	0.391652	0.391652	0.391652	0.391652	0.391652
		symmetric	60.0	1.000000	0.370289	nan	0.370289	0.370289	0.370289	0.370289	0.370289
			80.0	1.000000	0.290378	nan	0.290378	0.290378	0.290378	0.290378	0.290378
			100.0	1.000000	0.320610	nan	0.320610	0.320610	0.320610	0.320610	0.320610

Alpha ~ Per Doc Topics
Beta ~ Per Word Topics

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Since our data is social media content, and our posts are relatively short, starting with a low Alpha & Beta parameter proved to be good intuition

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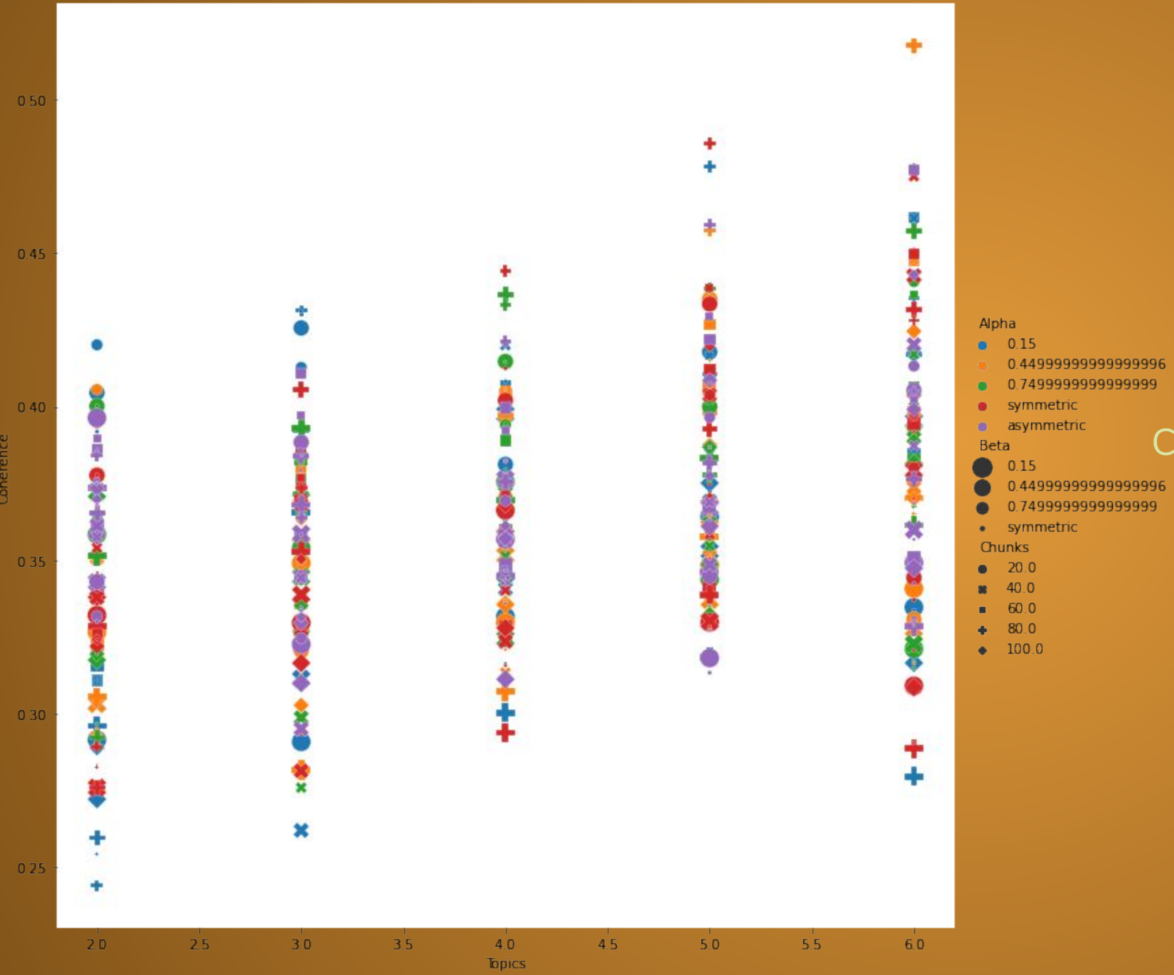

Tuning Method 2:

K_topics ~ How many topics are their

Chunksize ~ n documents to train on each pass

~

Unlike other machine learning models, the batch size for LDA is much more than a matter of time and computational resources.

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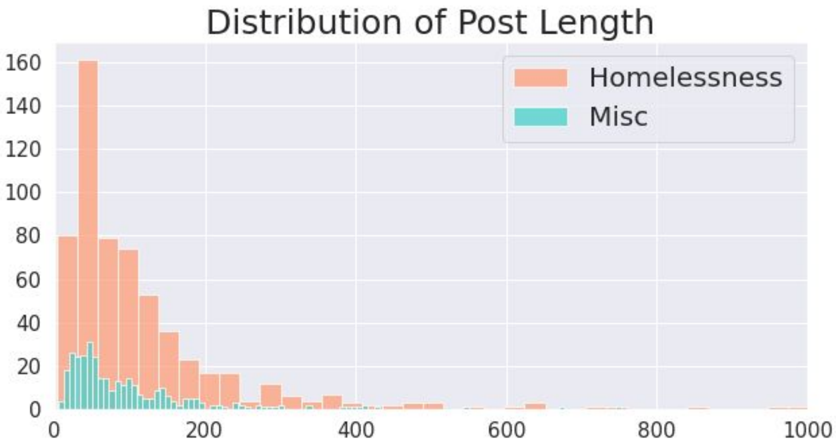
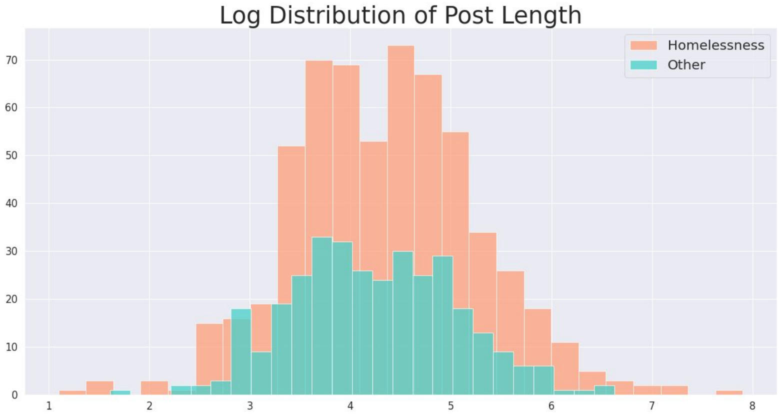
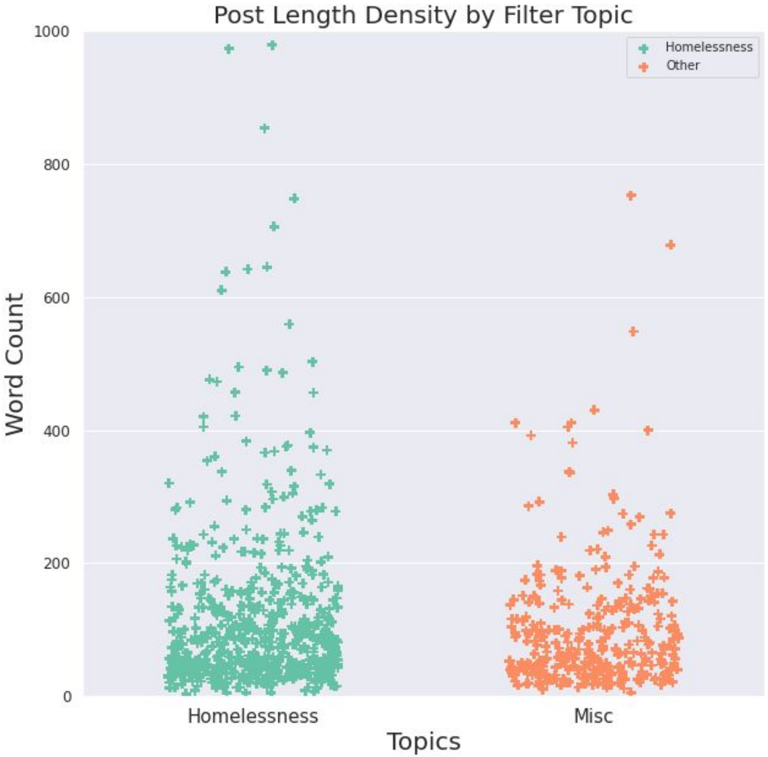
Word Count Distributions








Sentence Topic Coloring for Documents: 7 to 13
Doc 0: happen second strange walk park bring afternoon alley bit lose past ready recycling ...
Doc 1: emergency go happen help homeneighbor try housing family situation thank year neighborhood purchase ...
Doc 2: th away hope know morning run say catch bike door garage act hair person ...
Doc 3: look thank chip donate event food leave lot open place recommendation soda water weekend ...
Doc 4: camp love city claim homeless reason refuse lot accomplish actually anti base citation consideration ...
Doc 5: let away help know neighbor week couple great homeless safe place beloved bench cold ...
Doc 6: camp go squatter come neighbor homeless night leave place clean disappear glad mess responsibility ...

Let’s Visualize!

- Simplexes
- Filters Topics
- Final Topics

Compound Coherence : 47%

Perplexity : -7.56846

location	Word Count	Angry	Surprise	Sad	Fear	Happy	Polarity
92nd and Grove	37.000000	0.000000	0.110000	0.220000	0.330000	0.330000	0.876000
Allendale	21.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Arvada Columbine	164.000000	0.150000	0.220000	0.220000	0.220000	0.190000	0.907600
Aurora	59.666667	0.026667	0.125000	0.091667	0.495000	0.095000	0.686733
Aurora Arts District	129.200000	0.036000	0.398000	0.122000	0.338000	0.104000	0.401360
Aurora Cultural Arts District	145.916667	0.045833	0.185833	0.158333	0.415833	0.110833	0.856608
Barnum	49.000000	0.000000	0.400000	0.100000	0.400000	0.100000	0.908000
Barnum West	128.000000	0.050000	0.210000	0.160000	0.370000	0.210000	-0.818300
Beeler Park	145.000000	0.000000	0.166667	0.113333	0.416667	0.306667	0.955600
Berkeley-Regis	383.000000	0.160000	0.140000	0.180000	0.390000	0.140000	-0.724200
Bluff Lake Aurora	74.000000	0.000000	0.270000	0.090000	0.360000	0.270000	0.888100
Central Park	69.685714	0.052571	0.184571	0.200857	0.299714	0.203714	0.652954
Cheesman Park	31.000000	0.000000	0.330000	0.170000	0.500000	0.000000	0.750600
Cherry Creek North	126.062500	0.064375	0.246250	0.245000	0.318750	0.123750	0.343781
City Park	91.181818	0.033636	0.131818	0.218182	0.526364	0.090909	0.597609
Congress Park	116.660714	0.057857	0.220536	0.244821	0.311250	0.147321	0.618389
Crestmoor/Mayfair Park	167.428571	0.032381	0.271905	0.160000	0.313333	0.171905	0.838557
East Colfax	111.100000	0.029667	0.140333	0.225333	0.302333	0.135667	0.525913
Fort Logan	65.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-0.153100
Gov	109.747126	0.039080	0.232414	0.161494	0.418506	0.113563	0.313345
Hale	186.782609	0.034348	0.173478	0.193913	0.438696	0.158696	0.422170
Highlands	54.000000	0.000000	0.140000	0.290000	0.290000	0.290000	0.962800
Hilltop	247.586207	0.021034	0.228276	0.231379	0.338276	0.144483	0.403083
Historic Montclair	82.250000	0.008750	0.268750	0.172500	0.416250	0.132500	0.396837
Hoffman Heights	71.307692	0.051538	0.173846	0.142308	0.445385	0.185385	0.463431
Holly Hills	42.000000	0.000000	0.500000	0.000000	0.500000	0.000000	0.668800
Hudson Street	28.000000	0.000000	0.500000	0.000000	0.500000	0.000000	0.000000
Locust St	70.750000	0.000000	0.152500	0.302500	0.135000	0.160000	-0.048325
Lowry	80.860465	0.045581	0.207674	0.161628	0.393721	0.143023	0.549219
Mayfair	161.166667	0.064333	0.156333	0.188667	0.328000	0.229667	0.438057
Memorial Park	126.000000	0.230000	0.080000	0.150000	0.080000	0.460000	0.971000
Montbello	84.333333	0.033333	0.227222	0.210000	0.302222	0.115556	0.535667
Morris Heights	85.000000	0.127500	0.280000	0.247500	0.282500	0.062500	0.327400
North Aurora/Fitzsimons	98.312500	0.043125	0.226875	0.200000	0.440625	0.088125	0.485931
North Park Hill	83.076923	0.019231	0.208462	0.144615	0.422308	0.127692	0.576538
Northeast Park Hill	144.678571	0.031071	0.235000	0.213214	0.338929	0.145000	0.609157
Old Thornton	305.000000	0.060000	0.350000	0.120000	0.320000	0.150000	0.992400
Parkfield	24.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.458800
RiNo Art District	20.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000
Skyland	169.000000	0.090000	0.270000	0.090000	0.230000	0.320000	0.994700
Sloans/Highlands	106.666667	0.000000	0.263333	0.216667	0.303333	0.216667	0.429233
South Park Hill	113.178571	0.067143	0.210714	0.217143	0.345893	0.121429	0.545304
Thornton	151.000000	0.045000	0.325000	0.085000	0.325000	0.220000	0.953350
Vasquez Blvd	115.000000	0.016667	0.230000	0.253333	0.306667	0.196667	0.965233
Wandering View	2705.000000	0.030000	0.280000	0.150000	0.400000	0.150000	0.999300
Wash Park West	38.000000	0.000000	0.140000	0.430000	0.430000	0.000000	0.734500
Westwood	13.000000	0.000000	0.500000	0.250000	0.000000	0.250000	0.751200
Westy Hills	88.000000	0.000000	0.600000	0.000000	0.300000	0.100000	0.727400
Whittier	50.000000	0.080000	0.170000	0.420000	0.330000	0.000000	-0.190100
Windsor Gardens East	59.000000	0.000000	0.400000	0.200000	0.200000	0.200000	0.911000
Wyco Park	226.000000	0.000000	0.140000	0.140000	0.670000	0.050000	-0.655300

author	Word Count	Angry	Surprise	Sad	Fear	Happy	Polarity
Abby Leeper	54.000000	0.000000	0.250000	0.250000	0.250000	0.250000	0.937900
Abeth Parisian	78.000000	0.000000	0.000000	0.670000	0.000000	0.330000	0.784000
Adam Oderberg	51.000000	0.000000	0.200000	0.000000	0.600000	0.200000	0.676700
Alex Williams	87.000000	0.100000	0.100000	0.300000	0.400000	0.100000	0.168000
Alexandra Kyles	160.000000	0.050000	0.140000	0.380000	0.330000	0.100000	0.982100
Alexis Mera	13.000000	0.000000	0.250000	0.250000	0.500000	0.000000	0.824100
Ali Rodriguez	138.000000	0.090000	0.450000	0.090000	0.360000	0.000000	0.484000
Allison Beasley	748.000000	0.010000	0.170000	0.270000	0.430000	0.120000	0.998300
Allison O'keeffe	34.000000	0.000000	0.500000	0.000000	0.250000	0.250000	0.815600
Allison Rawls	92.000000	0.000000	0.120000	0.380000	0.380000	0.120000	0.301800
Amanda Biffle	120.000000	0.150000	0.150000	0.310000	0.380000	0.000000	0.955600
Amanda Toney	172.000000	0.000000	0.260000	0.370000	0.370000	0.000000	-0.619700
Amber Vail	35.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.666200
America Bateman	65.000000	0.000000	0.250000	0.000000	0.000000	0.750000	0.717000
America PÃ©rez	36.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000
Amy Bachmeier	157.000000	0.000000	0.260000	0.050000	0.580000	0.110000	0.955700
Amy Pomante	188.000000	0.120000	0.240000	0.080000	0.320000	0.240000	0.990700
Andrew Sweet	94.000000	0.000000	0.090000	0.640000	0.270000	0.000000	0.337600
Angel Rodriguez	90.000000	0.090000	0.270000	0.270000	0.270000	0.090000	0.314500
Ann Burke	99.000000	0.290000	0.000000	0.290000	0.430000	0.000000	0.848800
Ann Smith	20.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000
Anna McCaffery	41.000000	0.000000	0.330000	0.330000	0.170000	0.170000	-0.361400
Anne Bouise Ward	284.000000	0.090000	0.260000	0.090000	0.140000	0.430000	0.992300
Arlene Burciaga	50.000000	0.080000	0.170000	0.420000	0.330000	0.000000	-0.190100
Audrey Burquest	59.000000	0.140000	0.140000	0.290000	0.140000	0.290000	0.796900

Conclusions & Next Steps

1. LDA has promising applications in Targeted Campaing's
2. The CoC Annual Homeless Count Desperately need's improved.
3. Developed LDA model comparison methodology.
4. Constructing a full API for Nextdoor for use in topic analysis would be a good use of time and resources for the Denver Area.

1. Semantic Word Embedding with lda2vec
2. Expand text2emotion library
3. Explore alternative data sources
4. Refining a labeled dataset for use in training Binary classifiers.
5. Gib's Sampling Method