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**Website Indexed: Yahoo**

### Step 1: Installing Solr

- Download solr-8.0.0 from <http://lucene.apache.org/solr/downloads.html>
- Set the host to a public URL: 'export SOLR\_HOST=nucleus.usc.edu'
- Create a new core 'myexample' by: 'solr create -c myexample'
- Index the 'yahoo' html pages with post -c myexample --filetypes html /path\_to\_yahoow\_craw\_data

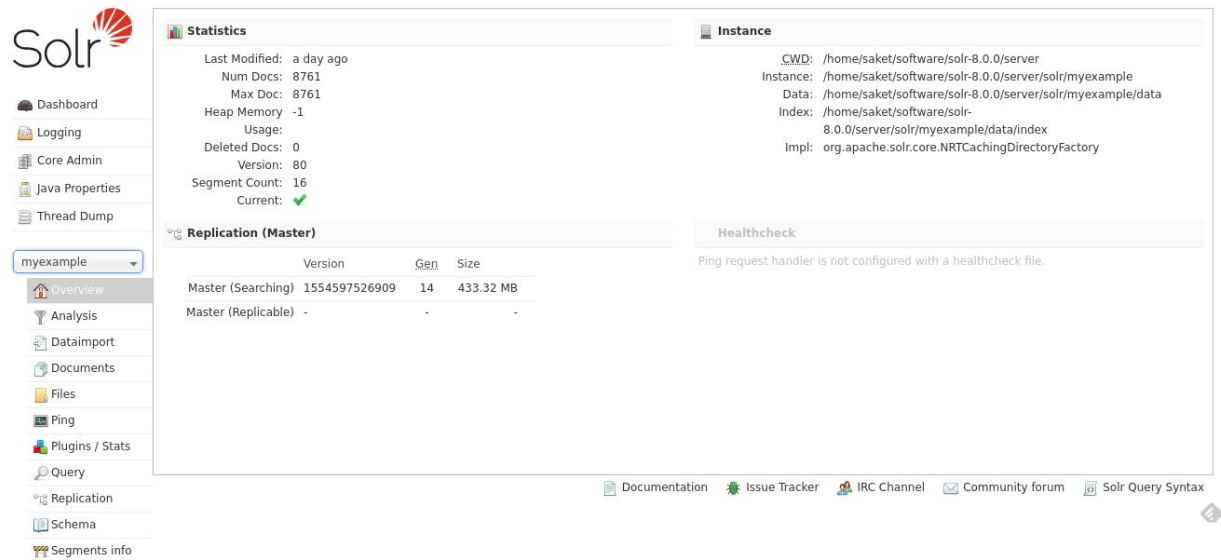


Figure 1. Solr page running on <http://nucleus.usc.edu:8983/solr/#/myexample/core-overview>

### Step 2: Extracting adjacency list using beautifulsoup4 (Python) and pageRank

- Use beautifulsoup4 to extract the outgoing links in all the html files and converted them to corresponding filenames using the 'URLtoHTML\_yahoo\_news.csv' file. This involved creating an adjacency list file parsable by networkx library.
- The adjacency file was in turn used to create a 'external\_PageRankFile.txt' using the 'pagerank' function from network with the following parameters: 'alpha=0.85, personalization=None, max\_iter=30, tol=1e-06, nstart=None, weight='weight', dangling=None'
- 'external\_PageRankFile.txt' generated using the previous step is then copied to the 'myexample' core directory of 'solr'
- Two config files required changes as 'managed.schema' and 'solrconfig.xml' as mentioned in the Homework4 instructions PDF. These changes can be verified after reloading the 'Core Admin' page as in the screenshot below.

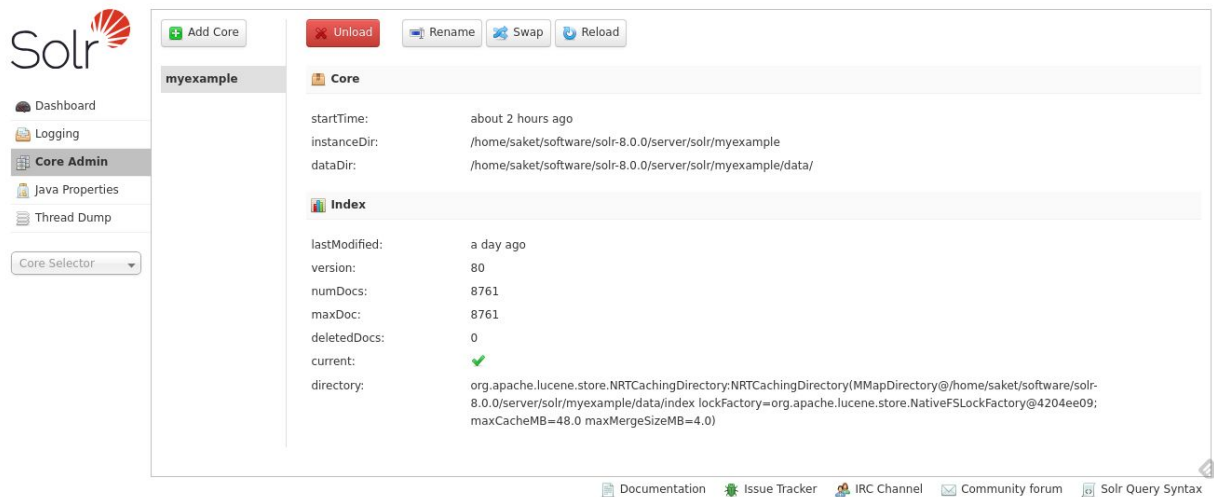


Figure 2. Core admin page for 'myexample'.

- The changes can be further verified on Solr UI by searching for 'Venezuela' and filtering on the 'id' field. The default search mode is lucene. The 'sort' box can then be set of 'pageRankFile desc' to get pageRank results. The ids appear to be different as shown in the next two screenshots.

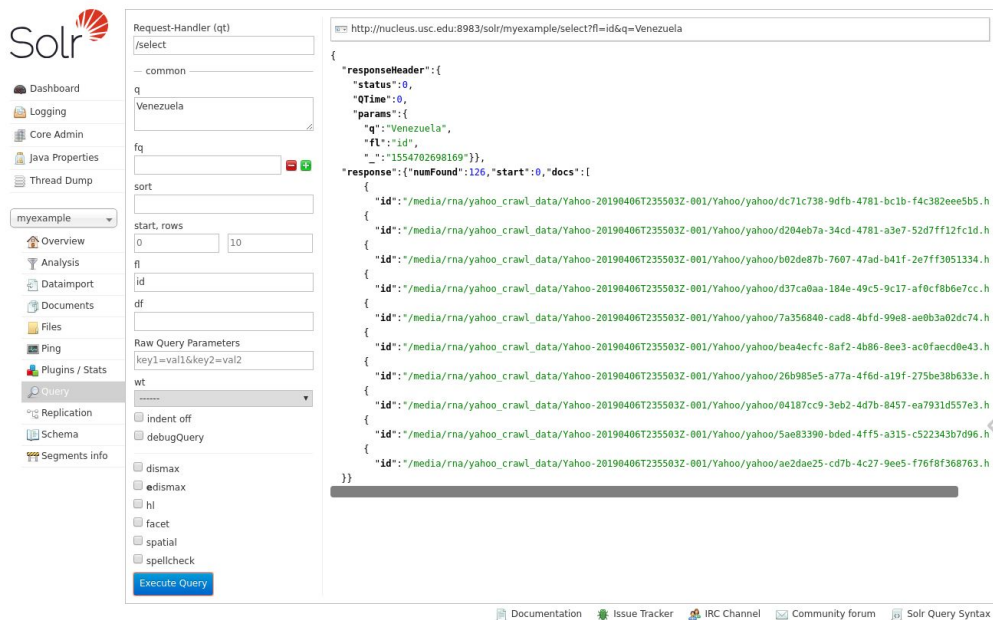


Figure 3. Search results for 'Venezuela' in Lucene mode.

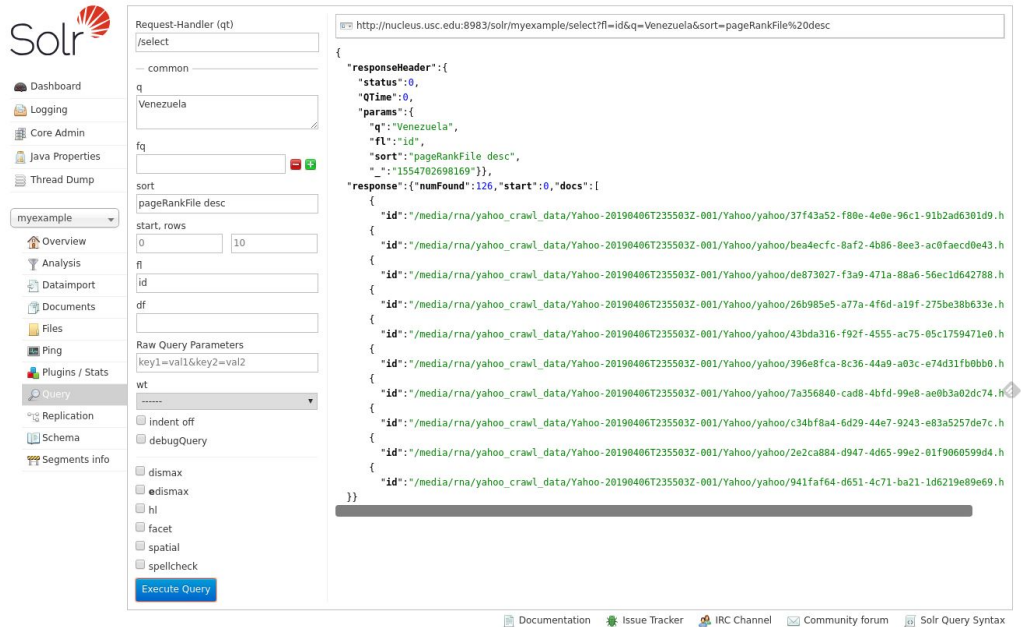


Figure 4. Search results for 'Venezuela' in pageRank mode.

## Explanation regarding why some pages have higher PageRank values than others

PageRank is a voting mechanism that assigns weights to a page depending on how many other pages link to this page. A page that is not referenced by any other page will have a smaller page rank, while on the other hand a page which has many pages referencing each other,

## Workflow of Yahoo Solr Client

- I use Python based dash (<https://dash.plot.ly>) to develop the search interface

### Yahoo Solr Client

Search term:

Lucene (Solr Default)

Figure 5. Default page for Yahoo Solr Client

- There are two search options : Lucene and PageRank

## Yahoo Solr Client

Search term:

Lucene (Solr Default)

Description	ID	Title	URL
Opponents of President Nicolas Maduro staged sit-ins and roadblocks across Venezuela on Monday, May 15, to press for elections, sparking new unrest.	/media/ma/yahoo_crawl_data/Yahoo-20190406T235503Z-001/Yahoo/yahoo/dc71c738-9dfb-4781-bc1b-f4c382ee5b5.html	<a href="#">Anti-Maduro protests continue in Venezuela</a>	<a href="https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-venezuela-opposition-leader-governor-photo-132714450.html">https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-venezuela-opposition-leader-governor-photo-132714450.html</a>
Venezuelan President Nicolas Maduro on Monday celebrated the election of a new legislative superbody that is expected to give the ruling Socialist Party sweeping powers and mocked U.S. criticism that the vote was an affront to democracy. At least 10 people were killed on Sunday in protests against the unpopular Maduro, who insists the new body known as the constituent assembly will bring peace after four months of protests that have killed more than 120 people. Countries across the Americas, as well as the European Union, denounced the creation of the assembly, which will have the power to rewrite the constitution.	/media/ma/yahoo_crawl_data/Yahoo-20190406T235503Z-001/Yahoo/yahoo/d204eb7a-34cd-4781-a3e7-52d7ff12fc1d.html	<a href="#">Venezuela braces for more protests after election</a>	<a href="https://www.yahoo.com/news/venezuela-braces-more-protests-election-slideshow-wp-143135783/photo-p-venezuela-president-nicolas-maduro-photo-143135961.html">https://www.yahoo.com/news/venezuela-braces-more-protests-election-slideshow-wp-143135783/photo-p-venezuela-president-nicolas-maduro-photo-143135961.html</a>
Democrats prepare a proposal that would bar President Trump from military intervention without congressional authorization.	/media/ma/yahoo_crawl_data/Yahoo-20190406T235503Z-001/Yahoo/yahoo/b02de87b-7607-47ad-b41f-2e7f3051334.html	<a href="#">Power out, water scarce, looting: What is Trump administration's next move in Venezuela?</a>	<a href="https://www.yahoo.com/news/power-water-scarce-looting-venezuela-administration-s-next-move-in-185817628.html">https://www.yahoo.com/news/power-water-scarce-looting-venezuela-administration-s-next-move-in-185817628.html</a>
Opponents of President Nicolas Maduro staged sit-ins and roadblocks across Venezuela on Monday, May 15, to press for elections, sparking new unrest.	/media/ma/yahoo_crawl_data/Yahoo-20190406T235503Z-001/Yahoo/yahoo/d37ca0aa-184e-49c5-9c17-af0cf8b6e7cc.html	<a href="#">Anti-Maduro protests continue in Venezuela</a>	<a href="https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046.html">https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046.html</a>
Opponents of President Nicolas Maduro staged sit-ins and roadblocks across Venezuela on Monday, May 15, to press for elections, sparking new unrest.	/media/ma/yahoo_crawl_data/Yahoo-20190406T235503Z-001/Yahoo/yahoo/7a356840-cad8-4bfd-99e8-ae0b3a02dc74.html	<a href="#">Anti-Maduro protests continue in Venezuela</a>	<a href="https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-demonstrator-holds-sign-doubles-photo-132714790.html">https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-demonstrator-holds-sign-doubles-photo-132714790.html</a>
Opponents of President Nicolas Maduro staged sit-ins and roadblocks across Venezuela on Monday, May 15, to press for elections, sparking new unrest.	/media/ma/yahoo_crawl_data/Yahoo-20190406T235503Z-001/Yahoo/yahoo/bea4ecfc-8af2-4b86-8ee3-ac0faecd0e43.html	<a href="#">Anti-Maduro protests continue in Venezuela</a>	<a href="https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-demonstrator-sits-discarded-stove-photo-132714988.html">https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-demonstrator-sits-discarded-stove-photo-132714988.html</a>
Opponents of President Nicolas Maduro staged sit-ins and roadblocks across Venezuela on Monday, May 15, to press for elections, sparking new unrest.	/media/ma/yahoo_crawl_data/Yahoo-20190406T235503Z-001/Yahoo/yahoo/26b985e5-a77a-4f6d-a19f-275be38b633e.html	<a href="#">Anti-Maduro protests continue in Venezuela</a>	<a href="https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-opposition-supporters-carry-materials-photo-132714045.html">https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-opposition-supporters-carry-materials-photo-132714045.html</a>
Opponents of President Nicolas Maduro staged sit-ins and roadblocks across Venezuela on Monday, May 15, to press for elections, sparking new unrest.	/media/ma/yahoo_crawl_data/Yahoo-20190406T235503Z-001/Yahoo/yahoo/04187cc9-3eb2-4d7b-8457-ea7931d557e3.html	<a href="#">Anti-Maduro protests continue in Venezuela</a>	<a href="https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-woman-lies-middle-street-photo-132714398.html">https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-woman-lies-middle-street-photo-132714398.html</a>
Opponents of President Nicolas Maduro staged sit-ins and roadblocks across Venezuela on Monday, May 15, to press for elections, sparking new unrest.	/media/ma/yahoo_crawl_data/Yahoo-20190406T235503Z-001/Yahoo/yahoo/5ae83390-bded-4ff5-a315-c522343b7d96.html	<a href="#">Anti-Maduro protests continue in Venezuela</a>	<a href="https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-opposition-supporter-looks-during-photo-132714002.html">https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-opposition-supporter-looks-during-photo-132714002.html</a>
Opponents of President Nicolas Maduro staged sit-ins and roadblocks across Venezuela on Monday, May 15, to press for elections, sparking new unrest.	/media/ma/yahoo_crawl_data/Yahoo-20190406T235503Z-001/Yahoo/yahoo/ae2dae25-cd7b-4c27-9ee5-f76f8f368763.html	<a href="#">Anti-Maduro protests continue in Venezuela</a>	<a href="https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-opposition-supporters-carry-materials-photo-132714747.html">https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-opposition-supporters-carry-materials-photo-132714747.html</a>

Figure 6. Search results for “Venezuela” using the default Lucene option

# Yahoo Solr Client

Search term: Venezuela

PageRank

Lucene (Solr Default)

PageRank	ID	Title	URL
musicians in venezuela have been taking their instruments to protests this year, and a violinist was killed in June. Here are some of the players in action.	/media/rna/yahoo_crawl_data/Yahoo-20190406T235503Z-001/Yahoo/yahoo/37f43a52-f80e-4e0e-96c1-91b2ad6301d9.html	Venezuela's symphony of protests	<a href="https://www.yahoo.com/news/venezuela-symphony-protests-slideshow-wp-090055434/photo-p-musicians-play-instruments-during-photo-090055073.html">https://www.yahoo.com/news/venezuela-symphony-protests-slideshow-wp-090055434/photo-p-musicians-play-instruments-during-photo-090055073.html</a>
Opponents of President Nicolas Maduro staged sit-ins and roadblocks across Venezuela on Monday, May 15, to press for elections, sparking new unrest.	/media/rna/yahoo_crawl_data/Yahoo-20190406T235503Z-001/Yahoo/yahoo/bea4ecfc-8af2-4b86-8ee3-ac0faecd0e43.html	Anti-Maduro protests continue in Venezuela	<a href="https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-demonstrator-sits-discarded-stove-photo-132714988.html">https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-demonstrator-sits-discarded-stove-photo-132714988.html</a>
<p>&lt;p&gt;The jury of the 61st World Press Photo Contest has selected an image by Venezuelan photographer &lt;a rel="nofollow" href="https://twitter.com/rschmidt"&gt;Ronaldo Schmidt&lt;/a&gt; as the 2018 World Press Photo of the Year. Schmidt, a staff photographer for Agence France-Presse based in Mexico, won with his image entitled "Venezuela Crisis," showing a protester on fire during clashes with police in Caracas, Venezuela.&lt;/p&gt;           &lt;p&gt;Schmidt's winning photo — which also won first prize in the Spot News Stories category — shows José Víctor Salazar Balza, 28, on fire amid violent clashes with riot police during a protest against President Nicolás Maduro, in Caracas, Venezuela. Salazar was set alight when the gas tank of a motorbike exploded. He survived the incident with first- and second-degree burns.&lt;/p&gt;           &lt;p&gt;The 2018 Photo Contest drew entries from around the world: 4,548 photographers from 125 countries submitted 73,044 images. The jury gave prizes in eight categories to 42 photographers from 22 countries.&lt;/p&gt;           &lt;p&gt;The prize-winning photographs are assembled into an exhibition that travels to 100 locations in 45 countries and is seen by more than 4 million people each year. The winning pictures are also published in the annual yearbook, which is available in multiple languages. The World Press Photo Exhibition 2018 opens in De Nieuwe Kerk, Amsterdam, on April 14, 2018. For more information about the traveling exhibition, please &lt;a rel="nofollow" href="https://www.worldpressphoto.org/exhibitions"&gt;follow this link&lt;/a&gt;.&lt;/p&gt;           &lt;p&gt;&lt;strong&gt;Discover all of the winners and the nominated photos in an image gallery at the &lt;a rel="nofollow" href="https://www.worldpressphoto.org/collection/photo/2018"&gt;World Press Photo website&lt;/a&gt;.&lt;/em&gt;&lt;/strong&gt;&lt;/p&gt;           &lt;p&gt;&lt;strong&gt;See more news-related &lt;a rel="nofollow" href="https://www.yahoo.com/news/originals/"&gt;photo galleries&lt;/a&gt; and follow us on &lt;a rel="nofollow" href="http://yahoonewsphotos.tumblr.com/"&gt;Yahoo News Photo Tumblr&lt;/a&gt;.&lt;/em&gt;&lt;/strong&gt;&lt;/p&gt;         </p>	/media/rna/yahoo_crawl_data/Yahoo-20190406T235503Z-001/Yahoo/yahoo/de873027-f3a9-471a-88a6-56ec1d642788.html	Winners of 61st World Press Photo Contest	<a href="https://www.yahoo.com/news/world-press-photo-2018-goes-slideshow-wp-132714046/photo-p-banned-beauty-suzanne-11-photo-190923610.html">https://www.yahoo.com/news/world-press-photo-2018-goes-slideshow-wp-132714046/photo-p-banned-beauty-suzanne-11-photo-190923610.html</a>
Opponents of President Nicolas Maduro staged sit-ins and roadblocks across Venezuela on Monday, May 15, to press for elections, sparking new unrest.	/media/rna/yahoo_crawl_data/Yahoo-20190406T235503Z-001/Yahoo/yahoo/26b985e5-a77a-4f6d-a19f-275be38b633e.html	Anti-Maduro protests continue in Venezuela	<a href="https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-opposition-supporters-carry-materials-photo-132714045.html">https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-opposition-supporters-carry-materials-photo-132714045.html</a>
Musicians in Venezuela have been taking their instruments to protests this year, and a violinist was killed in June. Here are some of the players in action.	/media/rna/yahoo_crawl_data/Yahoo-20190406T235503Z-001/Yahoo/yahoo/43bda316-f92f-4555-ac75-05c1759471e0.html	Venezuela's symphony of protests	<a href="https://www.yahoo.com/news/venezuela-symphony-protests-slideshow-wp-090055434/photo-p-venezuelan-violinist-wuilly-arteaga-photo-090055593.html">https://www.yahoo.com/news/venezuela-symphony-protests-slideshow-wp-090055434/photo-p-venezuelan-violinist-wuilly-arteaga-photo-090055593.html</a>
David Whelan, a lawyer who specializes in information and technology, was diving into books about Russian negotiation tactics and using Google Translate to glean clues about how his twin brother got wrapped up in what he views as a fabricated spying scandal. Meanwhile, Paul Whelan turned a year older	/media/rna/yahoo_crawl_data/Yahoo-20190406T235503Z-001/Yahoo/yahoo/396e8fca-8c36-44a9-a03c-e74d31fb0bb0.html	Trump, a self-proclaimed champion of Americans detained abroad, quiet on former Marine held in Russia	<a href="https://www.yahoo.com/news/trump-a-self-proclaimed-champion-of-americans-detained-abroad-quiet-on-former-marine-held-in-russia-13000990.html">https://www.yahoo.com/news/trump-a-self-proclaimed-champion-of-americans-detained-abroad-quiet-on-former-marine-held-in-russia-13000990.html</a>
Opponents of President Nicolas Maduro staged sit-ins and roadblocks across Venezuela on Monday, May 15, to press for elections, sparking new unrest.	/media/rna/yahoo_crawl_data/Yahoo-20190406T235503Z-001/Yahoo/yahoo/7a356840-cad8-4bfd-99e8-ae0b3a02dc74.html	Anti-Maduro protests continue in Venezuela	<a href="https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-demonstrator-holds-sign-doubles-photo-132714790.html">https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-demonstrator-holds-sign-doubles-photo-132714790.html</a>
Venezuelan security forces disperse protesters opposed to President Nicolas Maduro with water cannons in the capital, Caracas.	/media/rna/yahoo_crawl_data/Yahoo-20190406T235503Z-001/Yahoo/yahoo/c34bf8a4-6d29-44e7-9243-e83a5257de7c.html	Water cannons blast Venezuelan protesters	<a href="https://www.yahoo.com/news/water-cannons-blast-venezuelan-protesters-slideshow-wp-213432034/photo-p-demonstrators-clash-riot-security-photo-213432979.html">https://www.yahoo.com/news/water-cannons-blast-venezuelan-protesters-slideshow-wp-213432034/photo-p-demonstrators-clash-riot-security-photo-213432979.html</a>
Venezuela's opposition kicked off a symbolic vote on Sunday seen likely to reject plans by President Nicolas Maduro to rewrite the constitution.	/media/rna/yahoo_crawl_data/Yahoo-20190406T235503Z-001/Yahoo/yahoo/2e2ca884-d947-4d65-99e2-01f9060599d4.html	Venezuelans cast ballots in symbolic opposition vote	<a href="https://www.yahoo.com/news/venezuelans-cast-ballots-symbolic-opposition-slideshow-wp-151554551/photo-p-people-wait-cast-ballots-photo-151554441.html">https://www.yahoo.com/news/venezuelans-cast-ballots-symbolic-opposition-slideshow-wp-151554551/photo-p-people-wait-cast-ballots-photo-151554441.html</a>
Venezuela's opposition kicked off a symbolic vote on Sunday seen likely to reject plans by President Nicolas Maduro to rewrite the constitution.	/media/rna/yahoo_crawl_data/Yahoo-20190406T235503Z-001/Yahoo/yahoo/941faf64-d651-4c71-ba21-1d6219e89e69.html	Venezuelans cast ballots in symbolic opposition vote	<a href="https://www.yahoo.com/news/venezuelans-cast-ballots-symbolic-opposition-slideshow-wp-151554551/photo-p-person-votes-during-unofficial-photo-151554413.html">https://www.yahoo.com/news/venezuelans-cast-ballots-symbolic-opposition-slideshow-wp-151554551/photo-p-person-votes-during-unofficial-photo-151554413.html</a>

Figure 7. Search results for “Venezuela” using the PageRank Option.

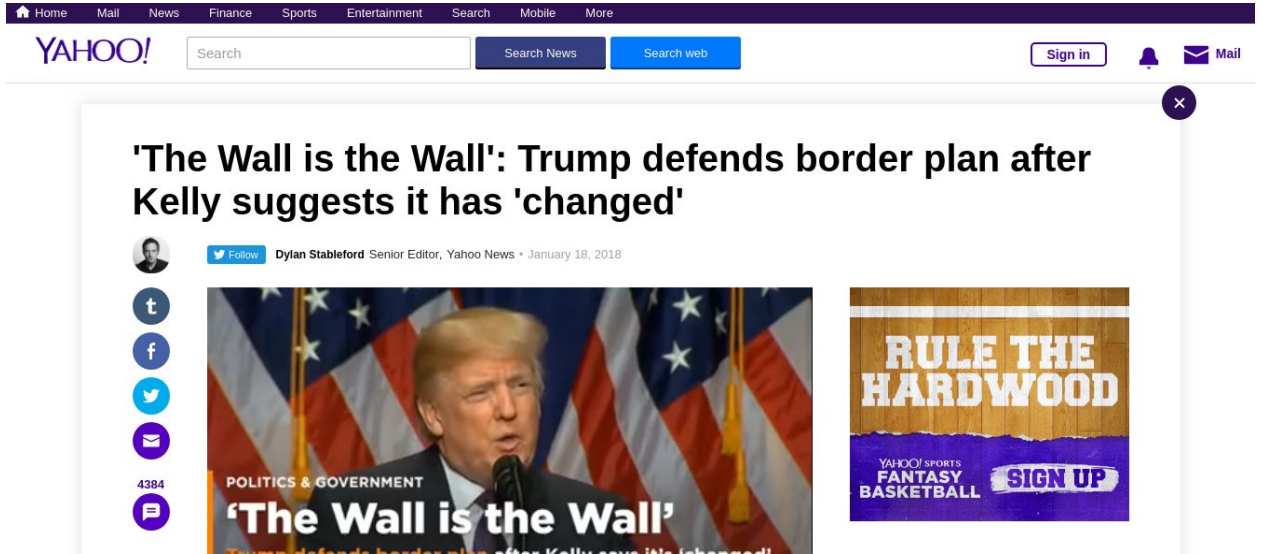


Figure 8. Result # 1 for 'Wall' using the default Lucene ranking

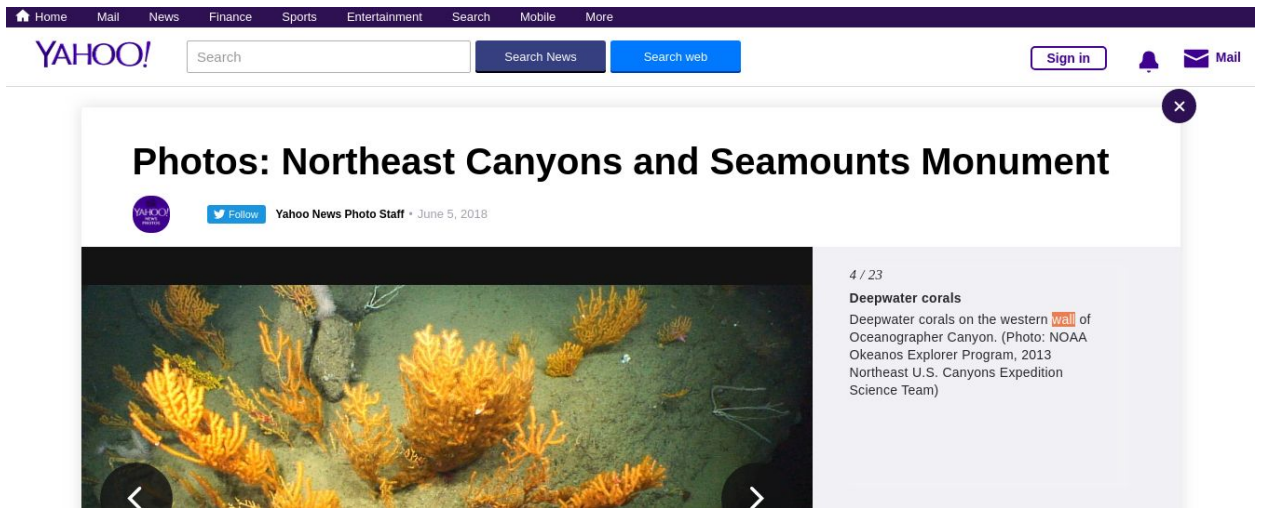


Figure 9. Result # 1 for 'Wall' using PageRank algorithm

Table 1. Search results for Venezuela

	Lucene	PageRank
0	<a href="https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-venezuela-opposition-leader-governor-photo-132714450.html">https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-venezuela-opposition-leader-governor-photo-132714450.html</a>	<a href="https://www.yahoo.com/news/venezuela-symphony-protests-slideshow-wp-090055434/photo-p-musicians-play-instruments-during-photo-090055073.html">https://www.yahoo.com/news/venezuela-symphony-protests-slideshow-wp-090055434/photo-p-musicians-play-instruments-during-photo-090055073.html</a>
1	<a href="https://www.yahoo.com/news/venezuela-braces-more-protests-election-slideshow-wp-143135783/photo-p-venezuela-president-nicolas-m">https://www.yahoo.com/news/venezuela-braces-more-protests-election-slideshow-wp-143135783/photo-p-venezuela-president-nicolas-m</a>	<a href="https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-demonstrator-sits-discarded-st">https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-demonstrator-sits-discarded-st</a>

	<a href="http://aduro-photo-143135961.html">aduro-photo-143135961.html</a>	<a href="http://ove-photo-132714988.html">ove-photo-132714988.html</a>
2	<a href="https://www.yahoo.com/news/power-water-s-carce-looting-venezuela-185817628.html">https://www.yahoo.com/news/power-water-s-carce-looting-venezuela-185817628.html</a>	<a href="https://www.yahoo.com/news/world-press-photo-2018-goes-slideshow-wp-190923871/photo-p-banned-beauty-suzanne-11-photo-190923610.html">https://www.yahoo.com/news/world-press-photo-2018-goes-slideshow-wp-190923871/photo-p-banned-beauty-suzanne-11-photo-190923610.html</a>
3	<a href="https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046.html">https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046.html</a>	<a href="https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-opposition-supporters-carry-materials-photo-132714045.html">https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-opposition-supporters-carry-materials-photo-132714045.html</a>
4	<a href="https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-demonstrator-holds-sign-doubles-photo-132714790.html">https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-demonstrator-holds-sign-doubles-photo-132714790.html</a>	<a href="https://www.yahoo.com/news/venezuela-symphony-protests-slideshow-wp-090055434/photo-p-venezuelan-violinist-wuilly-arteaga-photo-090055593.html">https://www.yahoo.com/news/venezuela-symphony-protests-slideshow-wp-090055434/photo-p-venezuelan-violinist-wuilly-arteaga-photo-090055593.html</a>
5	<a href="https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-demonstrator-sits-discarded-stove-photo-132714988.html">https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-demonstrator-sits-discarded-stove-photo-132714988.html</a>	<a href="https://www.yahoo.com/news/trump-a-self-proclaimed-champion-of-americans-detained-abroad-quiet-on-former-marine-held-in-russia-130000990.html">https://www.yahoo.com/news/trump-a-self-proclaimed-champion-of-americans-detained-abroad-quiet-on-former-marine-held-in-russia-130000990.html</a>
6	<a href="https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-opposition-supporters-carry-materials-photo-132714045.html">https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-opposition-supporters-carry-materials-photo-132714045.html</a>	<a href="https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-demonstrator-holds-sign-doubles-photo-132714790.html">https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-demonstrator-holds-sign-doubles-photo-132714790.html</a>
7	<a href="https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-woman-lies-middle-street-photo-132714398.html">https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-woman-lies-middle-street-photo-132714398.html</a>	<a href="https://www.yahoo.com/news/water-cannons-blast-venezuelan-protesters-slideshow-wp-213432034/photo-p-demonstrators-clash-riot-security-photo-213432979.html">https://www.yahoo.com/news/water-cannons-blast-venezuelan-protesters-slideshow-wp-213432034/photo-p-demonstrators-clash-riot-security-photo-213432979.html</a>
8	<a href="https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-opposition-supporter-looks-during-photo-132714002.html">https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-opposition-supporter-looks-during-photo-132714002.html</a>	<a href="https://www.yahoo.com/news/venezuelans-cast-ballots-symbolic-opposition-slideshow-wp-151554551/photo-p-people-wait-cast-ballots-photo-151554441.html">https://www.yahoo.com/news/venezuelans-cast-ballots-symbolic-opposition-slideshow-wp-151554551/photo-p-people-wait-cast-ballots-photo-151554441.html</a>
9	<a href="https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-opposition-supporters-carry-materials-photo-132714747.html">https://www.yahoo.com/news/anti-maduro-protests-continue-venezuela-slideshow-wp-132714046/photo-p-opposition-supporters-carry-materials-photo-132714747.html</a>	<a href="https://www.yahoo.com/news/venezuelans-cast-ballots-symbolic-opposition-slideshow-wp-151554551/photo-p-person-votes-during-unofficial-photo-151554413.html">https://www.yahoo.com/news/venezuelans-cast-ballots-symbolic-opposition-slideshow-wp-151554551/photo-p-person-votes-during-unofficial-photo-151554413.html</a>

Table 2. Results for “Senate”

	Lucene	PageRank
0	<a href="https://www.yahoo.com/news/senate-skinny-repeal-obamacare-falls-apart-senate-floor-mccain-defec">https://www.yahoo.com/news/senate-skinny-repeal-obamacare-falls-apart-senate-floor-mccain-defec</a>	<a href="https://www.yahoo.com/news/5-things-didn-apos-t-164624622.html">https://www.yahoo.com/news/5-things-didn-apos-t-164624622.html</a>



	<a href="https://www.yahoo.com/news/senate-judiciary-committee-vote-kavanaugh-slideshow-wp-170920887/photo-p-senate-judiciary-committee-member-photo-170920673.html">ts-072042708.html</a>	
1	<a href="https://www.yahoo.com/news/senate-judiciary-committee-vote-kavanaugh-slideshow-wp-170920887/photo-p-senate-judiciary-committee-member-photo-170920673.html">https://www.yahoo.com/news/senate-judiciary-committee-vote-kavanaugh-slideshow-wp-170920887/photo-p-senate-judiciary-committee-member-photo-170920673.html</a>	<a href="https://www.yahoo.com/news/arizona-senate-race-battle-political-evolution-184704894.html">https://www.yahoo.com/news/arizona-senate-race-battle-political-evolution-184704894.html</a>
2	<a href="https://www.yahoo.com/news/senate-judiciary-committee-vote-kavanaugh-slideshow-wp-170920887/photo-p-senate-judiciary-committee-members-photo-170920113.html">https://www.yahoo.com/news/senate-judiciary-committee-vote-kavanaugh-slideshow-wp-170920887/photo-p-senate-judiciary-committee-members-photo-170920113.html</a>	<a href="https://www.yahoo.com/news/metoo-hashtag-reached-nearly-half-facebook-accounts-america-consequences-just-begun-141545258.html">https://www.yahoo.com/news/metoo-hashtag-reached-nearly-half-facebook-accounts-america-consequences-just-begun-141545258.html</a>
3	<a href="https://www.yahoo.com/news/protesters-across-country-oppose-gops-slideshow-wp-133309283/photo-p-senate-democrats-gather-senate-photo-150009242.html">https://www.yahoo.com/news/protesters-across-country-oppose-gops-slideshow-wp-133309283/photo-p-senate-democrats-gather-senate-photo-150009242.html</a>	<a href="https://www.yahoo.com/news/protesters-across-country-oppose-gops-slideshow-wp-133309283/photo-p-protesters-against-republic-health-photo-150009618.html">https://www.yahoo.com/news/protesters-across-country-oppose-gops-slideshow-wp-133309283/photo-p-protesters-against-republic-health-photo-150009618.html</a>
4	<a href="https://www.yahoo.com/news/senate-judiciary-committee-vote-kavanaugh-slideshow-wp-170920887/photo-p-senate-judiciary-committee-chairman-photo-170920546.html">https://www.yahoo.com/news/senate-judiciary-committee-vote-kavanaugh-slideshow-wp-170920887/photo-p-senate-judiciary-committee-chairman-photo-170920546.html</a>	<a href="https://www.yahoo.com/news/debate-political-speech-pastors-say-fear-irs-pulpit-police-090005721.html">https://www.yahoo.com/news/debate-political-speech-pastors-say-fear-irs-pulpit-police-090005721.html</a>
5	<a href="https://www.yahoo.com/news/kavanaugh-ford-testify-senate-judiciary-slideshow-wp-145913238/photo-p-senate-judiciary-committee-member-photo-213813950.html">https://www.yahoo.com/news/kavanaugh-ford-testify-senate-judiciary-slideshow-wp-145913238/photo-p-senate-judiciary-committee-member-photo-213813950.html</a>	<a href="https://www.yahoo.com/news/anything-trump-could-party-cut-000000585.html">https://www.yahoo.com/news/anything-trump-could-party-cut-000000585.html</a>
6	<a href="https://www.yahoo.com/news/jeff-session-testifies-senate-hearing-slideshow-wp-191620787/photo-p-senate-intelligence-committee-chairman-photo-191620949.html">https://www.yahoo.com/news/jeff-session-testifies-senate-hearing-slideshow-wp-191620787/photo-p-senate-intelligence-committee-chairman-photo-191620949.html</a>	<a href="https://www.yahoo.com/news/major-automakers-urge-trump-not-freeze-fuel-economy-180110628--finance.html">https://www.yahoo.com/news/major-automakers-urge-trump-not-freeze-fuel-economy-180110628--finance.html</a>
7	<a href="https://www.yahoo.com/news/paul-ryan-prematurne-say-whether-house-pass-senate-healthcare-bill-174352395.html">https://www.yahoo.com/news/paul-ryan-prematurne-say-whether-house-pass-senate-healthcare-bill-174352395.html</a>	<a href="https://www.yahoo.com/news/democracy-darkest-moment-watergate-conspiracy-slideshow-wp-193445772/photo-p-former-u-attorney-general-photo-193445720.html">https://www.yahoo.com/news/democracy-darkest-moment-watergate-conspiracy-slideshow-wp-193445772/photo-p-former-u-attorney-general-photo-193445720.html</a>
8	<a href="https://www.yahoo.com/news/trump-senate-republicans-look-like-fools-dont-dump-60-vote-rule-135937103.html">https://www.yahoo.com/news/trump-senate-republicans-look-like-fools-dont-dump-60-vote-rule-135937103.html</a>	<a href="https://www.yahoo.com/news/democrat-doug-jones-beats-roy-moore-claim-deep-red-alabama-senate-seat-032527507.html">https://www.yahoo.com/news/democrat-doug-jones-beats-roy-moore-claim-deep-red-alabama-senate-seat-032527507.html</a>
9	<a href="https://www.yahoo.com/news/cbo-likely-say-millions-lose-coverage-senate-health-care-bill-215135603.html">https://www.yahoo.com/news/cbo-likely-say-millions-lose-coverage-senate-health-care-bill-215135603.html</a>	<a href="https://www.yahoo.com/news/donald-trumps-inauguration-day-slideshow-wp-135938222/photo-p-president-donald-trump-joined-photo-063038307.html">https://www.yahoo.com/news/donald-trumps-inauguration-day-slideshow-wp-135938222/photo-p-president-donald-trump-joined-photo-063038307.html</a>

Table 3. Search results for “Democrat”

	Lucene	PageRank
0	<a href="https://www.yahoo.com/news/midterms/house/seat">https://www.yahoo.com/news/midterms/house/seat</a>	<a href="https://www.yahoo.com/news/arizona-senate-race-battle-political-evolution-184704894.html">https://www.yahoo.com/news/arizona-senate-race-battle-political-evolution-184704894.html</a>
1	<a href="https://www.yahoo.com/news/midterms/house">https://www.yahoo.com/news/midterms/house</a>	<a href="https://www.yahoo.com/news/protesters-a-cross-country-oppose-gops-slideshow-wp-133309283/photo-p-protesters-against-republic-health-photo-150009618.html">https://www.yahoo.com/news/protesters-a-cross-country-oppose-gops-slideshow-wp-133309283/photo-p-protesters-against-republic-health-photo-150009618.html</a>
2	<a href="https://www.yahoo.com/news/democrats-rollin-g-2018-midterms-message-next-week-191517316.html">https://www.yahoo.com/news/democrats-rollin-g-2018-midterms-message-next-week-191517316.html</a>	<a href="https://www.yahoo.com/news/health-secretary-tom-price-resigns-private-plane-controversy-205246483.html">https://www.yahoo.com/news/health-secretary-tom-price-resigns-private-plane-controversy-205246483.html</a>
3	<a href="https://www.yahoo.com/news/white-house-tries-tag-democrats-blame-possible-shutdown-203618659.html">https://www.yahoo.com/news/white-house-tries-tag-democrats-blame-possible-shutdown-203618659.html</a>	<a href="https://www.yahoo.com/news/democrat-doug-jones-beats-roy-moore-claim-deep-red-alabama-senate-seat-032527507.html">https://www.yahoo.com/news/democrat-doug-jones-beats-roy-moore-claim-deep-red-alabama-senate-seat-032527507.html</a>
4	<a href="https://www.yahoo.com/news/democrats-hope-better-deal-message-will-resonate-190849661.html">https://www.yahoo.com/news/democrats-hope-better-deal-message-will-resonate-190849661.html</a>	<a href="https://www.yahoo.com/news/lewandowski-white-house-aides-dont-pre-existing-relationship-trump-trouble-keeping-144229752.html">https://www.yahoo.com/news/lewandowski-white-house-aides-dont-pre-existing-relationship-trump-trouble-keeping-144229752.html</a>
5	<a href="https://www.yahoo.com/news/democrats-2018-many-candidates-many-candidates-162905320.html">https://www.yahoo.com/news/democrats-2018-many-candidates-many-candidates-162905320.html</a>	<a href="https://www.yahoo.com/news/californias-gavin-newsom-wants-lead-way-post-bernie-post-hillary-party-160041273.html">https://www.yahoo.com/news/californias-gavin-newsom-wants-lead-way-post-bernie-post-hillary-party-160041273.html</a>
6	<a href="https://www.yahoo.com/news/will-democrats-filibuster-gorsuch-republicans-dont-think-so-111241581.html">https://www.yahoo.com/news/will-democrats-filibuster-gorsuch-republicans-dont-think-so-111241581.html</a>	<a href="https://www.yahoo.com/news/protesters-a-cross-country-oppose-gops-slideshow-wp-133309283.html">https://www.yahoo.com/news/protesters-a-cross-country-oppose-gops-slideshow-wp-133309283.html</a>
7	<a href="https://www.yahoo.com/news/democrats-wrest-power-away-republicans-state-level-183309710.html">https://www.yahoo.com/news/democrats-wrest-power-away-republicans-state-level-183309710.html</a>	<a href="https://www.yahoo.com/news/suspicious-packages-sent-top-democrats-slideshow-wp-172213218/photo-p-autozone-801-state-road-photo-112213686.html">https://www.yahoo.com/news/suspicious-packages-sent-top-democrats-slideshow-wp-172213218/photo-p-autozone-801-state-road-photo-112213686.html</a>
8	<a href="https://www.yahoo.com/news/democrats-vow-fight-lifetime-keep-brett-kavanaugh-off-supreme-court-051334537.html">https://www.yahoo.com/news/democrats-vow-fight-lifetime-keep-brett-kavanaugh-off-supreme-court-051334537.html</a>	<a href="https://www.yahoo.com/news/trump-trashes-obamacare-as-democrats-plan-its-defense-144658109.html">https://www.yahoo.com/news/trump-trashes-obamacare-as-democrats-plan-its-defense-144658109.html</a>
9	<a href="https://www.yahoo.com/news/house-democrats-likely-launch-wide-ranging-probes-trump-administration-050149619.html">https://www.yahoo.com/news/house-democrats-likely-launch-wide-ranging-probes-trump-administration-050149619.html</a>	<a href="https://www.yahoo.com/news/fire-trump-says-misspoke-russian-interference-u-s-election-192113980.html">https://www.yahoo.com/news/fire-trump-says-misspoke-russian-interference-u-s-election-192113980.html</a>

Table 4. Search results for “Republicans”

	Lucene	PageRank
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0	<a href="https://www.yahoo.com/news/midterms/house/seat">https://www.yahoo.com/news/midterms/house/seat</a>	<a href="https://www.yahoo.com/news/obama-says-does-not-anticipate-overnight-changes-cuba-193742668.html">https://www.yahoo.com/news/obama-says-does-not-anticipate-overnight-changes-cuba-193742668.html</a>
1	<a href="https://www.yahoo.com/news/midterms/house">https://www.yahoo.com/news/midterms/house</a>	<a href="https://www.yahoo.com/news/arizona-senate-race-battle-political-evolution-184704894.html">https://www.yahoo.com/news/arizona-senate-race-battle-political-evolution-184704894.html</a>
2	<a href="https://www.yahoo.com/news/grim-warnings-white-house-republicans-ahead-election-171354295--election.html">https://www.yahoo.com/news/grim-warnings-white-house-republicans-ahead-election-171354295--election.html</a>	<a href="https://www.yahoo.com/news/talk-grows-replacing-trump-convention-000000790.html">https://www.yahoo.com/news/talk-grows-replacing-trump-convention-000000790.html</a>
3	<a href="https://www.yahoo.com/news/mcconnell-plan-fails-will-democrats-republicans-work-together-fix-health-care-220450895.html">https://www.yahoo.com/news/mcconnell-plan-fails-will-democrats-republicans-work-together-fix-health-care-220450895.html</a>	<a href="https://www.yahoo.com/news/trump-makes-last-minute-pitch-gop-voters-georgia-sixth-125447167.html">https://www.yahoo.com/news/trump-makes-last-minute-pitch-gop-voters-georgia-sixth-125447167.html</a>
4	<a href="https://www.yahoo.com/news/democrats-wrest-power-away-republicans-state-level-183309710.html">https://www.yahoo.com/news/democrats-wrest-power-away-republicans-state-level-183309710.html</a>	<a href="https://www.yahoo.com/news/democrat-doug-jones-beats-roy-moore-claim-deep-red-alabama-senate-seat-032527507.html">https://www.yahoo.com/news/democrat-doug-jones-beats-roy-moore-claim-deep-red-alabama-senate-seat-032527507.html</a>
5	<a href="https://www.yahoo.com/news/republicans-rush-obamacare-repeal-and-replace-through-house-committees-233538837.html">https://www.yahoo.com/news/republicans-rush-obamacare-repeal-and-replace-through-house-committees-233538837.html</a>	<a href="https://www.yahoo.com/news/californias-gavin-newsom-wants-lead-way-post-bernie-post-hillary-party-160041273.html">https://www.yahoo.com/news/californias-gavin-newsom-wants-lead-way-post-bernie-post-hillary-party-160041273.html</a>
6	<a href="https://www.yahoo.com/news/gop-obamacare-replacement-narrowly-passes-out-of-committee-after-3-republicans-defect-145519718.html">https://www.yahoo.com/news/gop-obamacare-replacement-narrowly-passes-out-of-committee-after-3-republicans-defect-145519718.html</a>	<a href="https://www.yahoo.com/news/trump-trashes-obamacare-as-democrats-plan-its-defense-144658109.html">https://www.yahoo.com/news/trump-trashes-obamacare-as-democrats-plan-its-defense-144658109.html</a>
7	<a href="https://www.yahoo.com/news/house-republicans-reveal-obamacare-replacement-bill-013510100.html">https://www.yahoo.com/news/house-republicans-reveal-obamacare-replacement-bill-013510100.html</a>	<a href="https://www.yahoo.com/news/fire-trump-says-misspoke-russian-interference-u-s-election-192113980.html">https://www.yahoo.com/news/fire-trump-says-misspoke-russian-interference-u-s-election-192113980.html</a>
8	<a href="https://www.yahoo.com/news/just-year-republicans-became-far-skeptical-claims-racism-222912963.html">https://www.yahoo.com/news/just-year-republicans-became-far-skeptical-claims-racism-222912963.html</a>	<a href="https://www.yahoo.com/news/pray-republicans-huge-wave-november-trump-supporters-rally-minnesota-202428053.html">https://www.yahoo.com/news/pray-republicans-huge-wave-november-trump-supporters-rally-minnesota-202428053.html</a>
9	<a href="https://www.yahoo.com/news/down-ticket-5-republicans-finally-00000015.html">https://www.yahoo.com/news/down-ticket-5-republicans-finally-00000015.html</a>	<a href="https://www.yahoo.com/news/arizona-democrat-kyrsten-sinema-runs-hard-middle-defying-party-will-work-154711147.html">https://www.yahoo.com/news/arizona-democrat-kyrsten-sinema-runs-hard-middle-defying-party-will-work-154711147.html</a>

Table 5. Search results for “Patriot Movement”

	Lucene	PageRank
0	<a href="https://www.yahoo.com/news/jeffersons-tree-liberty-blood-schoolchildren-171918999.html">https://www.yahoo.com/news/jeffersons-tree-liberty-blood-schoolchildren-171918999.html</a>	<a href="https://www.yahoo.com/news/metoo-hashtag-reached-nearly-half-facebook-accounts-america-consequences-just-begun-141545258.html">https://www.yahoo.com/news/metoo-hashtag-reached-nearly-half-facebook-accounts-america-consequences-just-begun-141545258.html</a>
1	<a href="https://www.yahoo.com/news/talk-grows-replacing-trump-convention-000000790.html">https://www.yahoo.com/news/talk-grows-replacing-trump-convention-000000790.html</a>	<a href="https://www.yahoo.com/news/talk-grows-replacing-trump-convention-000000790.html">https://www.yahoo.com/news/talk-grows-replacing-trump-convention-000000790.html</a>

2	<a href="https://www.yahoo.com/news/nfl-winners-and-losers-free-agency-new-blood-every-division-winner-took-a-hit-144811887.html">https://www.yahoo.com/news/nfl-winners-and-losers-free-agency-new-blood-every-division-winner-took-a-hit-144811887.html</a>	<a href="https://www.yahoo.com/news/scenes-march-lives-rallies-around-slideshow-wp-142611024/photo-p-march-lives-las-vegas-photo-142611017.html">https://www.yahoo.com/news/scenes-march-lives-rallies-around-slideshow-wp-142611024/photo-p-march-lives-las-vegas-photo-142611017.html</a>
3	<a href="https://www.yahoo.com/news/in-the-age-of-trump-can-democrats-turn-orange-county-blue-their-first-target-is-darrell-issa-100018648.html">https://www.yahoo.com/news/in-the-age-of-trump-can-democrats-turn-orange-county-blue-their-first-target-is-darrell-issa-100018648.html</a>	<a href="https://www.yahoo.com/news/californias-gavin-newsom-wants-lead-way-post-bernie-post-hillary-party-160041273.html">https://www.yahoo.com/news/californias-gavin-newsom-wants-lead-way-post-bernie-post-hillary-party-160041273.html</a>
4	<a href="https://www.yahoo.com/news/down-ticket-11-balance-of-senate-could-hinge-on-wisconsin-rerematch-160029199.html">https://www.yahoo.com/news/down-ticket-11-balance-of-senate-could-hinge-on-wisconsin-rerematch-160029199.html</a>	<a href="https://www.yahoo.com/news/kerry-says-two-state-solution-jeopardy-middle-east-165011122.html">https://www.yahoo.com/news/kerry-says-two-state-solution-jeopardy-middle-east-165011122.html</a>
5	<a href="https://www.yahoo.com/news/as-unions-awaken-to-renewed-political-clout-sherrod-brown-hopes-to-benefit-100000104.html">https://www.yahoo.com/news/as-unions-awaken-to-renewed-political-clout-sherrod-brown-hopes-to-benefit-100000104.html</a>	<a href="https://www.yahoo.com/news/rnc-trump-meeting-delegate-challenge-000000076.html">https://www.yahoo.com/news/rnc-trump-meeting-delegate-challenge-000000076.html</a>
6	<a href="https://www.yahoo.com/news/unconventional-17-trump-meets-man-000000272.html">https://www.yahoo.com/news/unconventional-17-trump-meets-man-000000272.html</a>	<a href="https://www.yahoo.com/news/obamas-washington-slideshow-wp-154159168/photo-p-thank-notes-barack-obama-photo-154159996.html">https://www.yahoo.com/news/obamas-washington-slideshow-wp-154159168/photo-p-thank-notes-barack-obama-photo-154159996.html</a>
7	<a href="https://www.yahoo.com/news/unconventional-23-sanders-really-going-000000565.html">https://www.yahoo.com/news/unconventional-23-sanders-really-going-000000565.html</a>	<a href="https://www.yahoo.com/news/congress-time-soul-searching-abortion-090033472.html">https://www.yahoo.com/news/congress-time-soul-searching-abortion-090033472.html</a>
8	<a href="https://www.yahoo.com/news/how-the-tiny-montana-ski-town-of-whitefish-defeated-its-neonazi-trolls-and-became-a-national-model-of-resistance-225557686.html">https://www.yahoo.com/news/how-the-tiny-montana-ski-town-of-whitefish-defeated-its-neonazi-trolls-and-became-a-national-model-of-resistance-225557686.html</a>	<a href="https://www.yahoo.com/news/memorial-tributes-john-mccain-slideshow-wp-174958760/photo-p-rose-placed-honor-sen-photo-180058733.html">https://www.yahoo.com/news/memorial-tributes-john-mccain-slideshow-wp-174958760/photo-p-rose-placed-honor-sen-photo-180058733.html</a>
9	<a href="https://www.yahoo.com/news/wing-patriot-prayer-rally-counter-slideshow-wp-212529094/photo-p-wing-supporter-patriot-prayer-photo-212529706.html">https://www.yahoo.com/news/wing-patriot-prayer-rally-counter-slideshow-wp-212529094/photo-p-wing-supporter-patriot-prayer-photo-212529706.html</a>	<a href="https://www.yahoo.com/news/final-humiliation-reince-priebus-234008659.html">https://www.yahoo.com/news/final-humiliation-reince-priebus-234008659.html</a>

Table 6. Search results for “Oscar 2019”

	Lucene	PageRank
0	<a href="https://www.yahoo.com/news/spike-lee-pushes-back-trump-spat-continues-oscar-speech-162915413.html">https://www.yahoo.com/news/spike-lee-pushes-back-trump-spat-continues-oscar-speech-162915413.html</a>	<a href="https://www.yahoo.com/news/5-things-didn-a-post-164624622.html">https://www.yahoo.com/news/5-things-didn-a-post-164624622.html</a>
1	<a href="https://www.yahoo.com/news/skulduggery-powers-vice-000835154.html">https://www.yahoo.com/news/skulduggery-powers-vice-000835154.html</a>	<a href="https://www.yahoo.com/news/clinton-campaign-insists-trump-not-000000887.html">https://www.yahoo.com/news/clinton-campaign-insists-trump-not-000000887.html</a>
2	<a href="https://www.yahoo.com/news/topics/star-wars">https://www.yahoo.com/news/topics/star-wars</a>	<a href="https://www.yahoo.com/news/17-great-holiday-gifts-men-153729208/photo-p-strong-hometop-strong-p-photo-203407455.html">https://www.yahoo.com/news/17-great-holiday-gifts-men-153729208/photo-p-strong-hometop-strong-p-photo-203407455.html</a>

3	<a href="https://www.yahoo.com/news/trump-bashes-spike-lee-racist-hit-oscar-123716258.html">https://www.yahoo.com/news/trump-bashes-spike-lee-racist-hit-oscar-123716258.html</a>	<a href="https://www.yahoo.com/news/31-photos-rest-ore-faith-humanity-230203074/photo-p-cast-crew-em-black-photo-215511253.html">https://www.yahoo.com/news/31-photos-rest-ore-faith-humanity-230203074/photo-p-cast-crew-em-black-photo-215511253.html</a>
4	<a href="https://www.yahoo.com/news/kamala-harris-trump-racist-185542673.html">https://www.yahoo.com/news/kamala-harris-trump-racist-185542673.html</a>	<a href="https://www.yahoo.com/news/topics/sean-hannity">https://www.yahoo.com/news/topics/sean-hannity</a>
5	<a href="https://www.yahoo.com/news/topics/royal-family">https://www.yahoo.com/news/topics/royal-family</a>	<a href="https://www.yahoo.com/news/u-interior-official-suggests-trump-drilling-proposal-atlantic-232216676.html">https://www.yahoo.com/news/u-interior-official-suggests-trump-drilling-proposal-atlantic-232216676.html</a>
6	<a href="https://www.yahoo.com/news/the-names-behind-the-college-cheating-charges-141742295.html">https://www.yahoo.com/news/the-names-behind-the-college-cheating-charges-141742295.html</a>	<a href="https://www.yahoo.com/news/weed">https://www.yahoo.com/news/weed</a>
7	<a href="https://www.yahoo.com/news/topics/technology">https://www.yahoo.com/news/topics/technology</a>	<a href="https://www.yahoo.com/news/mueller-investigation-us-house-passes-144109100.html">https://www.yahoo.com/news/mueller-investigation-us-house-passes-144109100.html</a>
8	<a href="https://www.yahoo.com/news/gore-us-getting-close-political-shift-climate-change-223933667--politics.html">https://www.yahoo.com/news/gore-us-getting-close-political-shift-climate-change-223933667--politics.html</a>	<a href="https://www.yahoo.com/news/world-mocks-trump-performance-art-slideshow-wp-100028993/photo-p-worker-puts-final-touches-photo-060028323.html">https://www.yahoo.com/news/world-mocks-trump-performance-art-slideshow-wp-100028993/photo-p-worker-puts-final-touches-photo-060028323.html</a>
9	<a href="https://www.yahoo.com/news/topics/mexico">https://www.yahoo.com/news/topics/mexico</a>	<a href="https://www.yahoo.com/news/topics/syrian-crisis">https://www.yahoo.com/news/topics/syrian-crisis</a>

Table 7. Search results for “Channel”

	Lucene	PageRank
0	<a href="https://www.yahoo.com/news/topics/fox-news-channel">https://www.yahoo.com/news/topics/fox-news-channel</a>	<a href="https://www.yahoo.com/news/anything-trump-could-party-cut-000000585.html">https://www.yahoo.com/news/anything-trump-could-party-cut-000000585.html</a>
1	<a href="https://www.yahoo.com/news/topics/cnn">https://www.yahoo.com/news/topics/cnn</a>	<a href="https://www.yahoo.com/news/topics/sean-hannity">https://www.yahoo.com/news/topics/sean-hannity</a>
2	<a href="https://www.yahoo.com/news/service-charlottesville-victim-heather-heyer-call-righteous-action-172114070.html">https://www.yahoo.com/news/service-charlottesville-victim-heather-heyer-call-righteous-action-172114070.html</a>	<a href="https://www.yahoo.com/news/fire-trump-says-misspoke-russian-interference-u-s-election-192113980.html">https://www.yahoo.com/news/fire-trump-says-misspoke-russian-interference-u-s-election-192113980.html</a>
3	<a href="https://www.yahoo.com/news/topics/megyn-kelly">https://www.yahoo.com/news/topics/megyn-kelly</a>	<a href="https://www.yahoo.com/news/topics/syrian-crisis">https://www.yahoo.com/news/topics/syrian-crisis</a>
4	<a href="https://www.yahoo.com/news/topics/space-exploration">https://www.yahoo.com/news/topics/space-exploration</a>	<a href="https://www.yahoo.com/news/topics/illegal-immigration">https://www.yahoo.com/news/topics/illegal-immigration</a>
5	<a href="https://www.yahoo.com/news/topics/marijuana-legalization">https://www.yahoo.com/news/topics/marijuana-legalization</a>	<a href="https://www.yahoo.com/news/14-short-curl-y-hairstyles-try-204505194/photo-p-meg-ryan-ns-iconic-beachy-photo-202906448.html">https://www.yahoo.com/news/14-short-curl-y-hairstyles-try-204505194/photo-p-meg-ryan-ns-iconic-beachy-photo-202906448.html</a>
6	<a href="https://www.yahoo.com/news/topics/health">https://www.yahoo.com/news/topics/health</a>	<a href="https://www.yahoo.com/news/khashoggi-case-battle-leadership-islamic-world-141709338">https://www.yahoo.com/news/khashoggi-case-battle-leadership-islamic-world-141709338</a>

		<a href="#">html</a>
7	<a href="https://www.yahoo.com/news/topics/sex-crimes">https://www.yahoo.com/news/topics/sex-crimes</a>	<a href="https://www.yahoo.com/news/pentagon-report-found-flynn-lied-russia-contacts-seeking-security-clearance-205811956.html">https://www.yahoo.com/news/pentagon-report-found-flynn-lied-russia-contacts-seeking-security-clearance-205811956.html</a>
8	<a href="https://www.yahoo.com/news/topics/adam-ripon">https://www.yahoo.com/news/topics/adam-ripon</a>	<a href="https://www.yahoo.com/news/world-reaction-trump-decision-exit-slideshow-wp-175514841/photo-p-mayor-york-bill-blasio-photo-175514385.html">https://www.yahoo.com/news/world-reaction-trump-decision-exit-slideshow-wp-175514841/photo-p-mayor-york-bill-blasio-photo-175514385.html</a>
9	<a href="https://www.yahoo.com/news/topics/sanctuary-cities">https://www.yahoo.com/news/topics/sanctuary-cities</a>	<a href="https://www.yahoo.com/news/presidents-foreign-trip-comes-together-210745809.html">https://www.yahoo.com/news/presidents-foreign-trip-comes-together-210745809.html</a>

Table 8. Search results for “Wall”

	Lucene	PageRank
0	<a href="https://www.yahoo.com/news/wall-wall-trump-defends-border-plan-kelly-suggests-changed-145144558.html">https://www.yahoo.com/news/wall-wall-trump-defends-border-plan-kelly-suggests-changed-145144558.html</a>	<a href="https://www.yahoo.com/news/photos-northeast-canyons-seamounts-monument-slideshow-wp-175644115/photo-p-deepwater-coral-western-wall-photo-175644132.html">https://www.yahoo.com/news/photos-northeast-canyons-seamounts-monument-slideshow-wp-175644115/photo-p-deepwater-coral-western-wall-photo-175644132.html</a>
1	<a href="https://www.yahoo.com/news/imagining-trumps-big-beautiful-wall-might-183350584.html">https://www.yahoo.com/news/imagining-trumps-big-beautiful-wall-might-183350584.html</a>	<a href="https://www.yahoo.com/news/5-things-did-n-apost-164624622.html">https://www.yahoo.com/news/5-things-did-n-apost-164624622.html</a>
2	<a href="https://www.yahoo.com/news/trumps-big-beautiful-wall-collides-congress-102804089.html">https://www.yahoo.com/news/trumps-big-beautiful-wall-collides-congress-102804089.html</a>	<a href="https://www.yahoo.com/news/arizona-senate-race-battle-political-evolution-184704894.html">https://www.yahoo.com/news/arizona-senate-race-battle-political-evolution-184704894.html</a>
3	<a href="https://www.yahoo.com/news/border-wall-funding-threatens-government-shutdown-budget-battle-heats-180534239.html">https://www.yahoo.com/news/border-wall-funding-threatens-government-shutdown-budget-battle-heats-180534239.html</a>	<a href="https://www.yahoo.com/news/debate-political-speech-pastors-say-fear-irs-pulpit-police-090005721.html">https://www.yahoo.com/news/debate-political-speech-pastors-say-fear-irs-pulpit-police-090005721.html</a>
4	<a href="https://www.yahoo.com/news/gop-leaders-back-at-least-12-billion-for-border-wall-153042941.html">https://www.yahoo.com/news/gop-leaders-back-at-least-12-billion-for-border-wall-153042941.html</a>	<a href="https://www.yahoo.com/news/anything-trump-could-party-cut-000000585.html">https://www.yahoo.com/news/anything-trump-could-party-cut-000000585.html</a>
5	<a href="https://www.yahoo.com/news/on-the-border-waiting-for-the-big-beautiful-wall-225959295.html">https://www.yahoo.com/news/on-the-border-waiting-for-the-big-beautiful-wall-225959295.html</a>	<a href="https://www.yahoo.com/news/talk-grows-replacing-trump-convention-000000790.html">https://www.yahoo.com/news/talk-grows-replacing-trump-convention-000000790.html</a>
6	<a href="https://www.yahoo.com/news/sanders-calls-obamas-400k-wall-street-speaking-fee-unfortunate-150857262.html">https://www.yahoo.com/news/sanders-calls-obamas-400k-wall-street-speaking-fee-unfortunate-150857262.html</a>	<a href="https://www.yahoo.com/news/suspicious-package-reports-surge-deadly-texas-parcel-bombs-152854880.html">https://www.yahoo.com/news/suspicious-package-reports-surge-deadly-texas-parcel-bombs-152854880.html</a>
7	<a href="https://www.yahoo.com/news/steve-king-has-a-model-of-the-border-wall-he-wants-to-build-to-protect-our-superior-civilization-183248446.html">https://www.yahoo.com/news/steve-king-has-a-model-of-the-border-wall-he-wants-to-build-to-protect-our-superior-civilization-183248446.html</a>	<a href="https://www.yahoo.com/news/tributes-marking-one-anniversary-orlando-slideshow-wp-123048987/photo-p-mary-beth-nickerson-signs-photo-123048340.html">https://www.yahoo.com/news/tributes-marking-one-anniversary-orlando-slideshow-wp-123048987/photo-p-mary-beth-nickerson-signs-photo-123048340.html</a>

8	<a href="https://www.yahoo.com/news/rebuilding-great-wall-china-slideshow-wp-163045771.html">https://www.yahoo.com/news/rebuilding-great-wall-china-slideshow-wp-163045771.html</a>	<a href="https://www.yahoo.com/news/deadly-earthquake-tsunami-kill-hundreds-slideshow-wp-165040622/photo-p-people-survey-damage-shopping-photo-130040664.html">https://www.yahoo.com/news/deadly-earthquake-tsunami-kill-hundreds-slideshow-wp-165040622/photo-p-people-survey-damage-shopping-photo-130040664.html</a>
9	<a href="https://www.yahoo.com/news/rebuilding-great-wall-china-slideshow-wp-163045771/photo-people-reconstruction-jiankou-section-photo-153045265.html">https://www.yahoo.com/news/rebuilding-great-wall-china-slideshow-wp-163045771/photo-people-reconstruction-jiankou-section-photo-153045265.html</a>	<a href="https://www.yahoo.com/news/soon-miss-george-w-bush-not-age-trump-090020001.html">https://www.yahoo.com/news/soon-miss-george-w-bush-not-age-trump-090020001.html</a>

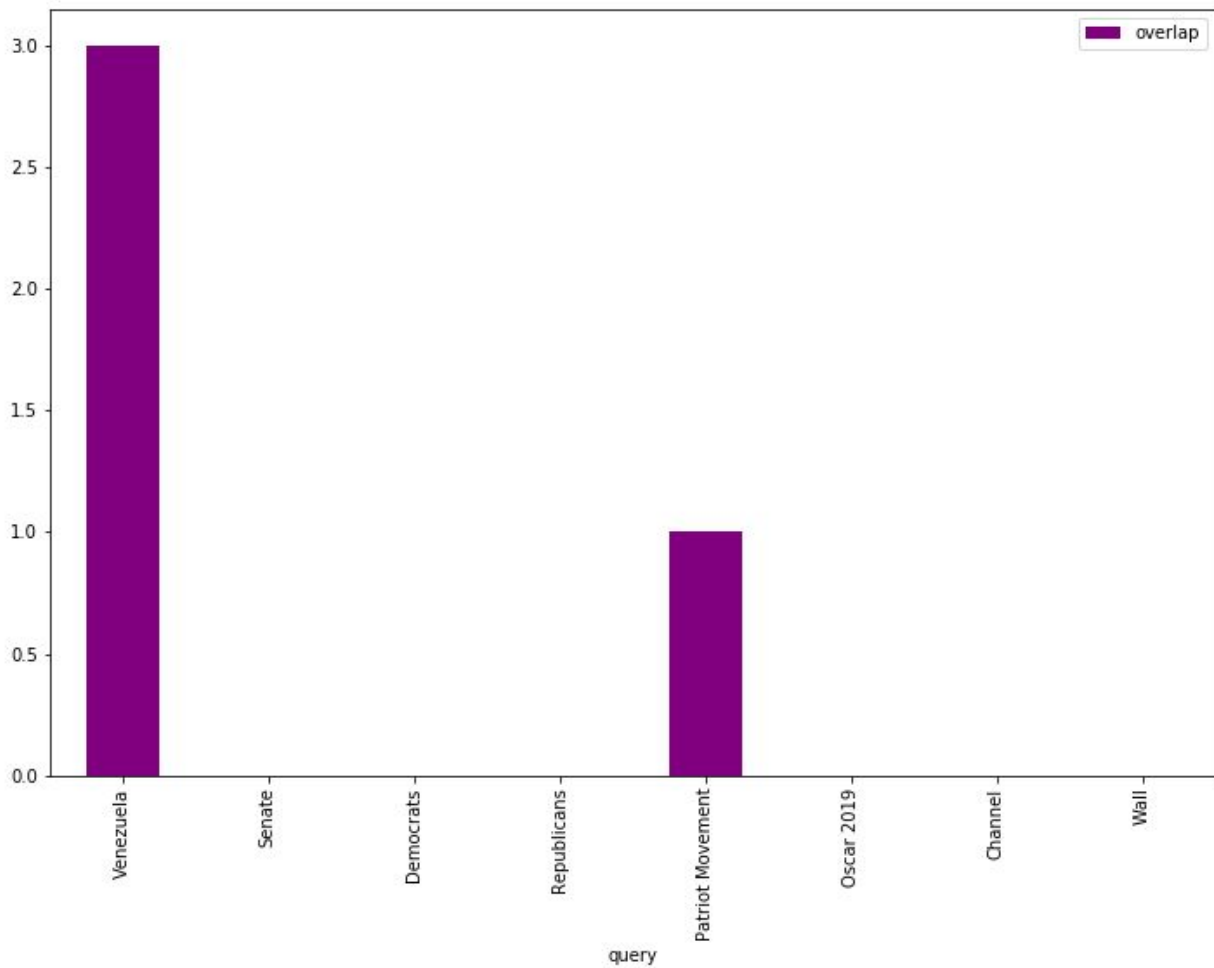


Figure 10. Only Venezuela and Patriot Movement have overlaps