CSCI 572 HW4 Report

Student name: Christina Wang

ID: 6371 2013 26

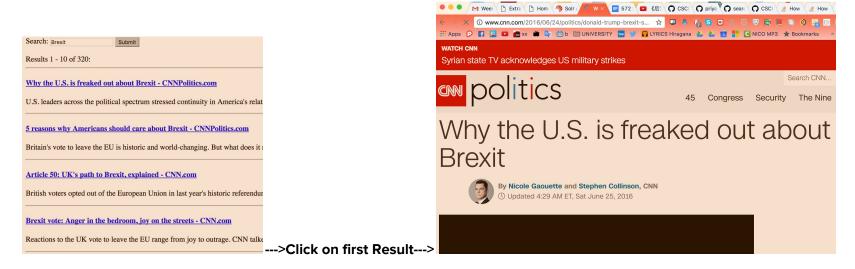
1. Steps of completing assignment

1.1 Setting up Solr and Apache server on local Mac

- Followed tutorial provided to install and run Solr on local host, successfully on http://localhost:8983/solr/#/hw4
- Installed Apache and PHP on local machine, used solr-php-client and its sample code provided on github to write a index.php folder, moved to Apache folder for visualization http://localhost/572hw4/index.php



1.2 Formatting the query with HTML so it only display useful information



1.3 Generating Edge List

- compute the EdgeList from the mapping files using JSOUP library, which is in Java. (following tutorial pdf ExtractingLinks + sample code in Appendix)
 - I used the sample code, fill in the missing code by adding: a **printerWriter** to write the edgeList txt; and two **hashmap** fileUrlMap & urlFileMap to search for matching file ID and url.

```
rintWriter writer = new PrintWriter(text);
HashMap<String,String> fileUrlMap = new HashMap<String, String>();
HashMap<String,String> urlFileMap= new HashMap<String, String>();
Set<String> edges = new HashSet<String>();
```

- Next I use **bufferReader** to read in the csv Files, and format and parse them to the two Hashmaps.

```
br = new BufferedReader(new FileReader(csvFile));
while ((line = br.readLine()) != null) {
    // use comma as separator
    String[] data = line.split(cvsSplitBy);
    fileUrlMap.put(data[0],data[1]);
    urlFileMap.put(data[1],data[0]);
    //System.out.println(country[0]);
}
```

- After running the code, now I get a pretty big **edgeList.txt** .. (~90MB)
 - CNNDownloadData.zip
 - edgeList.txt
 - mapCNNDataFile.csv

1.4 Next using this EdgeList compute the pageRank

- I used the **NetworkX** library in Python, to generate the pageRank file, with the following pageRank parameters
- alpha=0.85, personalization=None, max_iter=30, tol=1e-06, nstart=None, weight='weight',dangling=None

```
import networkx as nx
G=nx.read_edgelist("edgelist.txt",create_using=nx.DiGraph())
pr = nx.pagerank(G,alpha=0.85, personalization=None, max_iter=30, tol=1e-06,nstart=None,weight='weight',dangling =None)
with open("pagerank.txt","w")as fout:
    for doc in pr:
        fout.write(doc + "="+str(pr[doc]) + "\n")
fout.close()
```

- Now I got a pagerank.txt file with the format DocID=page rank score

```
pagerank2.txt >

Downloads/solr-6.5.0/crawl_data/df8d0869-9f8f-4608-aa0e-0c7b83d560c9.html=8.54753825613e-06
Downloads/solr-6.5.0/crawl_data/20cbca20-9973-458d-b0f5-531338a85ee7.html=8.40419200562e-06
Downloads/solr-6.5.0/crawl_data/4ce2edbc-286d-43e6-85dc-a0905362fc94.html=1.21279468858e-05
Downloads/solr-6.5.0/crawl_data/ba7fd25c-146d-476f-9a90-00d18b480c3d.html=8.97793672181e-06
Downloads/solr-6.5.0/crawl_data/fa7ff1dd-228c-4fb7-9f43-6cfe93479310.html=6.26149816574e-05
Downloads/solr-6.5.0/crawl_data/02ca7a0c-ce2e-40fa-8bf3-a23c17fec728.html=1.08000854062e-05
Downloads/solr-6.5.0/crawl_data/15dc8904-7772-47e6-b378-baa15a41f99a.html=3.99455005073e-05
Downloads/solr-6.5.0/crawl_data/620e063b-ac55-4170-9b40-306dd7932acc.html=8.15558891374e-06
Downloads/solr-6.5.0/crawl_data/216e604a-f445-4392-b65b-9ee083e37f32.html=1.14944199213e-05
Downloads/solr-6.5.0/crawl_data/8685da56-073a-408a-afcf-137bac2c2a02.html=8.04848589043e-06
```

1.5 Put pagerank file in Solr and see results

- Place pageRank in the core folder in Solr
- Changed several settings in managed-schema.xml and solrconfig.xml files
- reload the core to see the results.
- Use sort: pageRankFile desc to sort the results based on the ranking.
- Update index.php file, show result in sorted order.

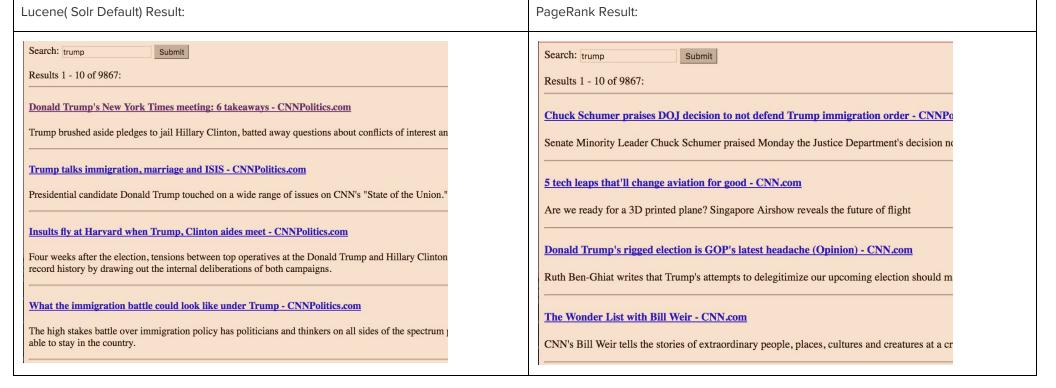
```
//modified

$additionalParameters = array(
  'sort' => 'pageRankFile desc',

);
//end modify
```

- Now I am ready to compare two algorithms sorting results.

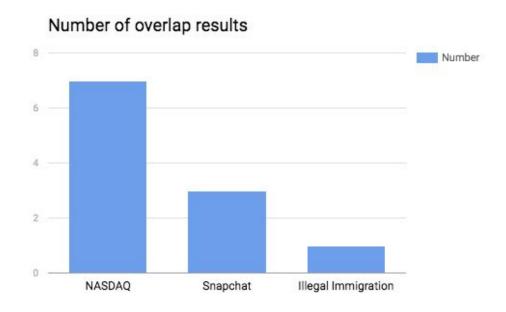




2. Query Comparison

2.1 Queries Comparison Results

- Result: Total of 11 overlaps in across 8 queries in CNN.com
 - Where 7 from NASDAQ, 3 from Snapchat 1 from Illegal Immigration



- **Observation**: Some web pages ranking higher in pageRank algorithm because most of them are of news topic of higher importance (e.g. Headlines vs sport). However some of them have lower relevance to the query compared to the Lucene algorithm(e.g. NBA results: none of the pageRank result is relevant). In summary, PageRank algorithm performs better than Lucene in some important topics, but worse in other less important ones.

2.2 Queries

Query	Lucene Results	PageRank Results	Overlap
Brexit	Why the U.S. is freaked out about Brexit - CNNPolitics.com U.S. leaders across the political spectrum stressed continuity in America's relationship with the UK as its vote to leave the European Union roiled global economic markets.	Who is Marine Le Pen? - CNN.com Riding a global wave of populism ahead of the French presidential election, far-right National Front leader, Marine Le Pen, is convinced that her time has finally come.	0
	5 reasons why Americans should care about Brexit - CNNPolitics.com Britain's vote to leave the EU is historic and world-changing. But what does it really mean for folks living on the other side of the Atlantic? Potentially, everything.	What separates Senegal from the rest of Africa? - CNN Video Find out why Senegal turns simple-minded assumptions and prejudice on their heads. "Anthony Bourdain Parts Unknown" airs Sundays at 9 p.m. ET/PT. Europe far-right conference: Leaders speak about Trump -	
	Article 50: UK's path to Brexit, explained - CNN.com British voters opted out of the European Union in last year's historic referendum, but Brexit can't actually get underway until Article 50 of the Lisbon Treaty is triggered.	CNNPolitics.com Swelling music and angry rhetoric, straight from the Donald Trump inauguration playbook, were prominent Saturday as Europe's nationalist parties gathered under the banner "Europe of Nations and Freedom" their political bloc in the European Union parliament.	
	Brexit vote: Anger in the bedroom, joy on the streets - CNN.com Reactions to the UK vote to leave the EU range from joy to outrage. CNN talked to some voters to gauge their feelings in light of the historic decision.	Italy's Prime Minister Matteo Renzi to resign after referendum defeat - CNN.com Italian Prime Minister Matteo Renzi said he will resign Monday after conceding an "extraordinary clear" defeat on an Italian constitutional referendum.	

#SafetyPin: How Brits are fighting the rise of racial abuse post-Brexit - CNN.com

A simple campaign to target racial abuse in UK calls on public to wear a #safetypin as a sign of solidarity with the country's immigrant population.

Brexit vote: Live updates - CNN.com

Voting has taken place in the UK in a once-in-a-generation referendum: The UK has chosen to leave the European Union. Follow the latest developments here.

UK to Europe: We're out - CNN.com

View Brexit news and the latest headlines on CNN.com

Brexit: The non-Brits guide to EU referendum - CNN.com

The Brexit referendum is the biggest decision Brits have faced in a generation. But if you haven't been paying attention, here's everything you need to know.

<u>EU referendum: The UK's Donald Trump moment -</u> CNNPolitics.com

England is having a Donald Trump moment.

It's Brexit: A visual guide to the UK's dramatic decision - CNN.com

The UK voted to separate from the European Union -- rippling financial markets, up-heaving leadership and triggering a wave

Is Donald Trump right about Hillary Clinton? - CNN.com

Trump's over-the-top speech on Clinton Wednesday could obscure his valid criticisms of the former Secretary of State with its conspiracy theorizing.

Europe News - CNN.com

View the latest European news and videos from the UK, Greece, France, Spain, Germany and other countries in Europe.

<u>Paris attacker Salah Abdeslam largely silent in court -</u> CNN.com

The sole survivor among the group of terrorists who launched the attacks in Paris last November appeared in court Friday but had little to say other than to complain about cameras in his jail cell.

How to prepare for the Day After (opinion) - CNN.com

If the transition team challenges are any indication, Juliette Kayyem writes that a Trump administration may not be prepared to handle a crisis with a steady hand and a commitment to unity.

Why has the pope said no to women priests? - CNN.com N/A

Trump rattles NATO with 'obsolete' blast - CNNPolitics.com

President-elect Donald Trump has caused "astonishment and

	of emotion. This is how it unfolded, how you're affected and what happens now.	agitation" within NATO while also labeling Angela Merkel's immigrations polices as "catastrophic".	
NASDAQ	CNN Profiles - Maribel Aber - Correspondent - CNN.com Maribel Aber is a business correspondent for CNN Newsource and the "Money Talks" correspondent for HLN's daily news program "Michaela."	Profile - CNN.com N/A Former Rep. Mike Oxley dies, 71 - CNNPolitics.com Former Ohio Republican Congressman Mike Oxley the	7
	A lot has changed in 108 years - CNN Video In 1908, the S&P 500 and Nasdaq didn't even exist yet. CNNMoney's Christine Romans looks at how things have changed since the Cubs last won the World Series.	co-author of a landmark anti-corporate fraud law that bears his name passed away Friday in his sleep, his son, Elvis, confirmed to CNN. He was 71. Cameron to resign, markets tumble after Brexit vote - CNN.com	
	Profile - CNN.com N/A	The United Kingdom's vote to leave the EU in a historic "Brexit" triggered British Prime Minister David Cameron's resignation and wreaked global market havoc.	
	Obama welcomes Chicago Cubs to the White House - CNNPolitics.com President Barack Obama welcomed the Chicago Cubs to the White House on Monday, in one of his final acts as its occupant.	Obama welcomes Chicago Cubs to the White House - CNNPolitics.com President Barack Obama welcomed the Chicago Cubs to the White House on Monday, in one of his final acts as its occupant.	
	MVP Ben Zobrist: Rain delay was really important - CNN Video Ben Zobrist, who went 10-for-28 (a .357 average) with two	44 ways to judge the Obama era - CNNPolitics.com President Barack Obama, the 44th commander in chief, caps off eight years in office on January 20.	

doubles, a triple, two RBIs and five runs in the series, was named World Series MVP.

Cubs manager celebrates win - CNN Video

The Chicago Cubs are World Series champions at long last, winning their first Fall Classic in 108 years, defeating the Cleveland Indians in 10 innings 8-7 in Game 7.

Terry Francona describes his nightmare before Game 7 - CNN Video

Joe Maddon and Terry Francona talk to the press before Game 7 of the World Series.

1993 yearbook prediction goes viral - CNN Video

A Chicago Cubs fan predicted in his 1993 yearbook that the team would win the 2016 World Series.

2014 tweet nails World Series prediction - CNN Video

A tweet from 2014 eerily predicting the 2016 World Series outcome went viral.

Opinion: Why America needed this Cubs win - CNN.com

After harrowing months of a dark presidential election, the Chicago Cubs victory is ray of optimism, a balm for a weary nation and a reminder or why we love the game.

MVP Ben Zobrist: Rain delay was really important - CNN Video

Ben Zobrist, who went 10-for-28 (a .357 average) with two doubles, a triple, two RBIs and five runs in the series, was named World Series MVP.

Cubs manager celebrates win - CNN Video

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Joe Maddon and Terry Francona talk to the press before Game 7 of the World Series.

1993 yearbook prediction goes viral - CNN Video

A Chicago Cubs fan predicted in his 1993 yearbook that the team would win the 2016 World Series.

A lot has changed in 108 years - CNN Video

In 1908, the S&P 500 and Nasdaq didn't even exist yet. CNNMoney's Christine Romans looks at how things have changed since the Cubs last won the World Series.

NBA

30 years of NBA All-Star slam dunk champs

The NBA's All-Star Slam Dunk Contest provides some of the most iconic moments in league history, dazzling viewers with its blend of athleticism and showmanship.

30 years of NBA slam dunk champions - CNN.com

Over the past three decades, the NBA Slam Dunk Contest has provided some of the most memorable moments in league history.

Game 7: Lebron James guides Cavaliers to NBA title win - CNN.com

The Cleveland Cavaliers won the NBA finals, defeating the Golden State Warriors 93-89 in Sunday's deciding Game 7.

Cleveland Cavaliers win first NBA title

See photos from Game 7 of the NBA Finals, where the Cleveland Cavaliers defeated the Golden State Warriors 93-89 for the first title in franchise history.

Golden State Warriors win record 73rd game - CNN.com

The Golden State Warriors sets the NBA regular-season wins record with 73, surpassing the 72-win Chicago Bulls from the 1995-96 season.

Stephen Curry unanimously voted MVP - CNN.com

WADA to consider banning countries for doping offenses - CNN Video

In an exclusive interview, WADA President Craig Reedie discusses the challenges the organization faces in its fight against doping.

<u>Landmarks turn blue, white and red in support for Paris - CNN Video</u>

Familiar structures around the world are bathed in blue, white and red in solidarity with France after the terror attacks in Paris.

5 tech leaps that'll change aviation for good - CNN.com

Are we ready for a 3D printed plane? Singapore Airshow reveals the future of flight

Who's who in the alleged Venezuela passport fraud case - CNN.com

A joint investigation by CNN and CNN en Español uncovered serious irregularities in the issuing of Venezuelan passports and visas. The investigation involved reviewing thousands of documents, conducting interviews in the U.S., Spain, Venezuela and the United Kingdom, as well as tracking down various officials from Venezuela.

<u>Donald Trump's rigged election is GOP's latest headache</u> (<u>Opinion</u>) - <u>CNN.com</u>

Ruth Ben-Ghiat writes that Trump's attempts to delegitimize our upcoming election should make clear what many Americans

Golden State Warriors guard Stephen Curry becomes the first unanimous MVP winner in NBA history

NBA All-Star Game - CNN.com

Pro basketball's finest players compete in New Orleans on Sun., Feb. 19, for the 66th NBA All-Star Gam

<u>Shaquille O'Neal and Charles Barkley on keeping fortune -</u> CNN.com

Less than an hour after signing his first professional contract, 20-year-old Shaquille O'Neal had already spent his first million.

Stephen Curry on NBA wins record: 'You've got to go for it' - CNN.com

Stephen Curry is arguably the best player in the NBA. He's having a career year. And he's leading the best team to potentially the best record in NBA history.

NBA 2017 All-Star Game moves to New Orleans - CNN.com

It's official: The NBA has moved the 2017 All-Star Game from Charlotte to New Orleans.

have known all along: he represents a clear and present danger to American democracy.

The Wonder List with Bill Weir - CNN.com

CNN's Bill Weir tells the stories of extraordinary people, places, cultures and creatures at a crossroads.

Ebola virus outbreak is 'out of control' in West Africa - CNN.com

The Ebola virus outbreak in West Africa has hit "unprecedented" proportions, according to relief workers.

<u>Denmark's reality TV darling is the anti-Trump (Opinion) -</u> CNN.com

Danes are obsessed with a reality TV star -- and it's US Ambassador Rufus Gifford. CNN's John Sutter says Gifford is the golden-retriver-walking anti-Trump.

Opinion: Nigeria's protests signal the end of blank checks for leaders - CNN.com

Protesters across the country showed leaders that they will be judged on action and outcomes, not intentions.

CNN gains exclusive access to China's space city - CNN Video

CNN's David McKenzie gains exclusive access to the astronauts at the center of China's secretive space program.

Denmark's reality TV darling is the anti-Trump (Opinion) - CNN.com Danes are obsessed with a reality TV star and it's US Ambassador Rufus Gifford. CNN's John Sutter says Gifford is the golden-retriver-walking anti-Trump.
Why so many who doubt climate change here? (Opinion) - CNN.com CNN's John D. Sutter visits Woodward County, Oklahoma, which has one of the highest rates of skepticism about climate change in the United States.
Climate change: 100 days to save the world (Opinion) - CNN.com N/A
Democratic candidates make pitch on Snapchat for the millennial vote - CNNPolitics.com With less than a week until the lowa caucuses, Hillary Clinton,
Bernie Sanders and Martin O'Malley have turned to the one place where they are ensured to get the attention of a younger audience: Snapchat.
Which generation has it worse? (Opinion) - CNN.com Is Generation X lost? Are Baby boomers narcissistic? What's your generation and how does it hold up?

CNN.com

Danny Cevallos: Police can handcuff residents to execute a search warrant, but Snapchatting images of it is asinine behavior not protected by the First Amendment or the courts.

<u>Congressman uses Snapchat instead of Email -</u> CNNPolitics.com

To weed through chaotic busy days on Capitol Hill, Rep. Sean Duffy (R-WI) uses Snapchat to communicate with his staff.

<u>Climate change: Vanishing stories, vanishing country -</u> **CNN**.com

One injustice of climate change is that it threatens to disappear entire countries. CNN's John Sutter is visiting one -- and documenting it on Snapchat.

CNN exclusive: Snapchat Interview with Rand Paul - CNNPolitics.com

In the first Snapchat interview with a U.S. lawmaker, ever, possible 2016 presidential candidate and Republican Senator Rand Paul dishes on Hillary Clinton, drones, 2016 and what he does to unwind.

<u>Bush campaign announcement to be curated on Snapchat - CNNPolitics.com</u>

Jeb Bush will be among the many 2016 presidential hopefuls experimenting with the disappearing messaging app, Snapchat.

Obama's final mission: Help Clinton close the deal - CNNPolitics.com

Hillary Clinton needs Barack Obama's powerful coalition to win states like North Carolina and Florida and capture the White House.

CNN exclusive: Snapchat Interview with Rand Paul - CNNPolitics.com

In the first Snapchat interview with a U.S. lawmaker, ever, possible 2016 presidential candidate and Republican Senator Rand Paul dishes on Hillary Clinton, drones, 2016 and what he does to unwind.

CNN Profiles - Ashley Codianni - Director of Social Publishing, CNN Worldwide - CNN.com

Ashley Codianni is the director of social publishing for CNN Worldwide.

<u>Teens spend 9 hours a day using media, report says - CNN.com</u>

A new report by Common Sense Media, exploring the daily media habits of tweens and teens, has implications for parents, educators and policymakers.

Bill Gates: Your question (and his response) - CNN.com

To meet the 2 degrees Celsius goal we basically need to ditch fossil fuels completely sometime around midcentury.

	CNN Profiles - Ashley Codianni - Director of Social Publishing, CNN Worldwide - CNN.com Ashley Codianni is the director of social publishing for CNN Worldwide.		
Illegal Immigration	California Senate passes 'anti-Arizona' bill to limit federal detainers on illegal immigrants - CNN.com California Senate passes an "anti-Arizona" bill to prevent racial profiling and limit federal requests to detain nonviolent illegal immigrants for deportation.	Chuck Schumer praises DOJ decision to not defend Trump immigration order - CNNPolitics.com Senate Minority Leader Chuck Schumer praised Monday the Justice Department's decision not to defend President Donald Trump's executive order on immigration and refugees, calling the order unconstitutional.	1
	Joy, criticism greet immigration policy move - CNN.com The news that the Obama administration is shifting its immigration policy for undocumented youth elicited a joyous reaction from them.	WADA to consider banning countries for doping offenses - CNN Video In an exclusive interview, WADA President Craig Reedie discusses the challenges the organization faces in its fight against doping.	
	Reality Check: Illegal immigration has plummeted - CNNPolitics.com "A nation without borders is not a nation," President Donald Trump said Wednesday in signing an executive action to start the process of building a wall along the southern border. "Beginning today, the United States of America gets back control of its borders, gets back its borders." Deported mom in spotlight of Trump crackdown debate -	Who's who in the alleged Venezuela passport fraud case - CNN.com A joint investigation by CNN and CNN en Español uncovered serious irregularities in the issuing of Venezuelan passports and visas. The investigation involved reviewing thousands of documents, conducting interviews in the U.S., Spain, Venezuela and the United Kingdom, as well as tracking down various officials from Venezuela.	
	CNN.com Guadalupe Garcia de Rayos, an undocumented mother of two American-born children who was deported to her native	Controversial comic Dieudonné denied Hong Kong entry -	

Mexico, has become the focus of a national debate over the Trump administration's crackdown on illegal immigration.

Showdown over immigration: 'This is an invasion' - CNN.com

National controversy over a surge of Central American immigrants illegally crossing the U.S. border establishes a new battleground in Murrieta, California.

Getting there

It is a powerful need: to see the man who shaped your life from afar for almost 13 years. For 14-year-old Jesús and his mother, it was enough to propel them on a dangerous and illegal journey. They made it to America. But what happens next?

For those living on border, security is complicated subject - CNN.com

Ranchers, border agents, and others who live along the U.S.-Mexico border weigh in on the immigration debate, as reform efforts stall on Capitol Hill.

<u>Source: Trump immigration plan mirrors post-9/11 policy - CNNPolitics.com</u>

At rallies in the last weeks of his presidential campaign, Donald Trump told his supporters "my plan ends illegal immigration and suspends immigration from terror problem regions" and that "we will stop illegal immigration, deport all criminal aliens... and it will happen within the first week of my presidency."

CNN.com

French comedian Dieudonné M'bala M'bala, who was last year sentenced to two months in prison for "inciting hatred," claims he's been held at Hong Kong airport.

CNN Profiles - Pamela Boykoff - Field Producer - CNN.com

Pamela Boykoff is a field producer based in CNN's Asia Pacific headquarters in Hong Kong. She has been with CNN since 2004.

7 types of evangelicals -- and how they'll affect 2016 - CNNPolitics.com

It's almost an axiom in U.S. politics: Evangelicals are the country's biggest and most powerful religious voting bloc. But the reality is more complex.

California Senate passes 'anti-Arizona' bill to limit federal detainers on illegal immigrants - CNN.com

California Senate passes an "anti-Arizona" bill to prevent racial profiling and limit federal requests to detain nonviolent illegal immigrants for deportation.

<u>Trump believes millions voted illegally, WH says -- but provides no proof - CNNPolitics.com</u>

President Donald Trump believes millions of votes were cast illegally in last year's election, White House press secretary Sean Spicer said on Tuesday, but he wouldn't provide any concrete evidence for the claim, which has long been debunked.

	Source: Trump immigration plan mirrors post-9/11 policy - CNNPolitics.com At rallies in the last weeks of his presidential campaign, Donald Trump told his supporters "my plan ends illegal immigration and suspends immigration from terror problem regions" and that "we will stop illegal immigration, deport all criminal aliens and it will happen within the first week of my presidency." Trump: Nikki Haley weak on illegal immigration - CNNPolitics.com Donald Trump struck back at South Carolina Gov. Nikki Haley, after she criticized the Republican presidential front-runner in her State of the Union rebuttal, and added that she's not "off to a good start" if she wants to be considered for his running mate.	How Neil Gorsuch became Donald Trump's Supreme Court nominee - CNNPolitics.com Judge Neil Gorsuch is one of the leading contenders to be President Donald Trump's nominee for the US Supreme Court. Who is Taya Kyle? - CNN Video Some background on Taya Kyle, the widow of 'American Sniper' Chris Kyle, who has been speaking out in support of Republican politicians and gun rights.	
Donald Trump	Trump talks immigration, marriage and ISIS - CNNPolitics.com Presidential candidate Donald Trump touched on a wide range of issues on CNN's "State of the Union." Donald Trump rails against judge's 'Mexican heritage' - CNN Video	Chuck Schumer praises DOJ decision to not defend Trump immigration order - CNNPolitics.com Senate Minority Leader Chuck Schumer praised Monday the Justice Department's decision not to defend President Donald Trump's executive order on immigration and refugees, calling the order unconstitutional.	0
	Donald Trump doubled down on his claim that the judge presiding over the Trump University lawsuit is treating him unfairly because of his "Mexican heritage."	5 tech leaps that'll change aviation for good - CNN.com Are we ready for a 3D printed plane? Singapore Airshow reveals the future of flight	

Gary Johnson blows Donald Trump a kiss - CNN Video

Libertarian presidential candidate Gary Johnson explains why he thinks Donald Trumps' views on Mexican immigrants are racist and blows the presumptive GOP nominee a kiss.

<u>Donald Trump: 'No one should be judged by their race' -</u> CNN Video

During a speech to the Faith and Freedom Coalition, presumptive GOP presidential nominee Donald Trump declared that "no one should be judged by their race."

<u>Pastor defends submitting questions to Donald Trump</u> - <u>CNN Video</u>

Bishop Wayne Jackson says that he submitted questions to Donald Trump prior to his upcoming interview with the Republican presidential candidate, but says he did not consult with Trump.

Donald Trump dances at church service - CNN Video

Donald Trump, for the first time as a presidential candidate, addressed members of a predominantly African-American congregation at the Great Faith Ministries in Detroit, part of his outreach to African-American voters.

<u>Donald Trump speaks to black voters at Detroit church</u> - CNN Video

Donald Trump made his case to African-American voters

<u>Donald Trump's rigged election is GOP's latest headache</u> (Opinion) - CNN.com

Ruth Ben-Ghiat writes that Trump's attempts to delegitimize our upcoming election should make clear what many Americans have known all along: he represents a clear and present danger to American democracy.

The Wonder List with Bill Weir - CNN.com

CNN's Bill Weir tells the stories of extraordinary people, places, cultures and creatures at a crossroads.

<u>Denmark's reality TV darling is the anti-Trump (Opinion) -</u> CNN.com

Danes are obsessed with a reality TV star -- and it's US Ambassador Rufus Gifford. CNN's John Sutter says Gifford is the golden-retriver-walking anti-Trump.

Opinion: Nigeria's protests signal the end of blank checks for leaders - CNN.com

Protesters across the country showed leaders that they will be judged on action and outcomes, not intentions.

<u>Deray, Santorum sat together, talked during church service - CNNPolitics.com</u>

A leading activist in the Black Lives Matter movement said he found himself unintentionally seated beside Republican Presidential Candidate Rick Santorum at the first Sunday

	Saturday that he, not Hillary Clinton, is the best candidate for the black community.	service following last week's Charleston Massacre.	
	Pastor will tweak Donald Trump interview questions - CNN Video As Donald Trump courts black voters in Philadelphia, his campaign faces new scrutiny after documents surfaced indicating that an upcoming interview might be scripted. CNN's Sara Murray reports.	CNN Profiles - Pamela Boykoff - Field Producer - CNN.com Pamela Boykoff is a field producer based in CNN's Asia Pacific headquarters in Hong Kong. She has been with CNN since 2004. 7 types of evangelicals and how they'll affect 2016 - CNNPolitics.com	
	Anti-Trump protests outside Detroit church - CNN Video Anti-Trump protesters gathered outside a church in Detroit where Donald Trump is scheduled to be interviewed by Bishop Wayne Jackson.	It's almost an axiom in U.S. politics: Evangelicals are the country's biggest and most powerful religious voting bloc. But the reality is more complex. Veterans unite for second deployment to Standing Rock -	
	Who is Donald Trump? - CNNPolitics.com Donald Trump launched his presidential campaign on June 16, ending more than two decades of persistent flirtation with the idea of running for the Oval Office.	CNN.com The Veterans Stand group is once again raising funds for protesters who have been fighting construction of the Dakota Access Pipeline.	
Russia	McCain rails against drawing equivalence between Putin, US - CNNPolitics.com Sen. John McCain on Tuesday delivered a fiery, not-so-subtle rebuttal to President Donald Trump's argument that the United States and Russia are morally equivalent, at one point slamming his hand on a lectern in condemning the Russian regime.	Chuck Schumer praises DOJ decision to not defend Trump immigration order - CNNPolitics.com Senate Minority Leader Chuck Schumer praised Monday the Justice Department's decision not to defend President Donald Trump's executive order on immigration and refugees, calling the order unconstitutional.	0

<u>Trump says he's unaware of reports Flynn discussed</u> sanctions with Russian ambassador - CNNPolitics.com

President Donald Trump said Friday afternoon he was unaware of reports that his national security adviser, Michael Flynn, may have spoken about sanctions with the Russian ambassador before the inauguration.

Pence: Trump camp had no contact with Russia - CNN Video

Speaking on Fox News, Vice President-elect Mike Pence wrote off allegations that the Trump campaign had contacts with Russia as an attempt to "delegitimize the election."

Sen. Coons: Flynn call with Russia 'suspicious' - CNN Video

Sen. Chris Coons said it "seems very suspicious" that President-elect Donald Trump's pick for national security advisor spoke to Russia's ambassador to the United States on the same day the Obama administration announced sanctions against Russia for alleged hacking during the presidential election.

<u>Christie: Flynn needs to clear up Russia conversation details</u> with Trump, Pence - CNNPolitics.com

New Jersey Gov. Chris Christie criticized President Donald Trump's national security adviser Michael Flynn Sunday, saying he needs to clear up questions about whether he discussed sanctions in his pre-inauguration conversations with the Russian ambassador to the United States.

WADA to consider banning countries for doping offenses - CNN Video

In an exclusive interview, WADA President Craig Reedie discusses the challenges the organization faces in its fight against doping.

5 tech leaps that'll change aviation for good - CNN.com

Are we ready for a 3D printed plane? Singapore Airshow reveals the future of flight

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Protesters across the country showed leaders that they will be judged on action and outcomes, not intentions.

<u>Deray, Santorum sat together, talked during church service -</u> CNNPolitics.com

A leading activist in the Black Lives Matter movement said he found himself unintentionally seated beside Republican Presidential Candidate Rick Santorum at the first Sunday service following last week's Charleston Massacre.

<u>7 types of evangelicals -- and how they'll affect 2016 -</u> CNNPolitics.com

It's almost an axiom in U.S. politics: Evangelicals are the country's biggest and most powerful religious voting bloc. But the reality is more complex.

Russian plane crash: \$50M reward for information - CNN.com

The Russian plane crash in Sinai, Egypt, last month was caused by a bomb, the Russian FSB chief says, and Russia offers a \$50 million reward for information.

Trump on hacking DNC: I think it was Russia - CNN Video

President-elect Donald Trump says he thinks Russia was behind the hacking of the DNC.

Pence: US needs common purposes with Russia - CNN Video

During a discussion with CNN's Dana Bash about Russian meddling in the US election, Vice President-elect Mike Pence said President-elect Donald Trump is determined to improve the relationship between the US and Russia.

Senate probe to review possible links between Russia, campaigns - CNN Video

The Senate Intelligence Committee's review of Russian meddling in the 2016 election will include a look at intelligence "regarding links between Russia and individuals associated with political campaigns." CNN's Phil Mattingly reports.

Reports: Flynn talked sanctions with Russia - CNN Video

President Trump's national security adviser, Michael Flynn, discussed lifting sanctions on Russia prior to Trump taking office, according to reports in the New York Times and the

<u>Veterans unite for second deployment to Standing Rock -</u> CNN.com

The Veterans Stand group is once again raising funds for protesters who have been fighting construction of the Dakota Access Pipeline.

The everything guide to chicken wings - CNN.com N/A

Eminem unleashes on Donald Trump in new song, "No Favors" - CNNPolitics.com

Eminem unleashed on President Donald Trump in a profanity-laced verse on "No Favors" — a song off fellow Big Sean's "I Decided" album, which is out Friday.

<u>Trump believes millions voted illegally, WH says -- but provides no proof - CNNPolitics.com</u>

President Donald Trump believes millions of votes were cast illegally in last year's election, White House press secretary Sean Spicer said on Tuesday, but he wouldn't provide any concrete evidence for the claim, which has long been debunked.

	Washington Post.	
NASA	Hate your ich? NASA wante you to work on Marc. CNN com	CNIN gains evaluaive access to Chinale anges sity. CNIN
	Hate your job? NASA wants you to work on Mars - CNN.com US space agency NASA has just released a series of retro recruitment posters that advertise potential positions it may one day need filled on Mars.	CNN gains exclusive access to China's space city - CNN Video CNN's David McKenzie gains exclusive access to the astronauts at the center of China's secretive space program.
	15 out-of-this-world photos from NASA's Instagram	Opinion: We need a price on carbon - CNN Video
	15 out-of-this-world photos from NASA's Instagram	John Sutter explains why he thinks a carbon tax will cut down on fossil fuel use.
	NASA satellite images show how polluted your country is - CNN.com	Closest habitable planet to Earth discovered - CNN Video
	New NASA satellite images show how pollution levels have changed in the last decade in various regions and 195 cities across the world.	Researchers at the University of New South Wales have discovered a habitable planet just 14 light years away from Earth.
	See NASA react as New Horizons probe arrives at Pluto - CNN Video See the reaction from NASA scientists as its New Horizons spacecraft conducts a Pluto flyby.	Array In Green Bank, West Virginia, population 143, researchers' efforts to listen to the universe means the use of a cell phone is grounds for prosecution.
	NASA makes historical pass by Pluto - CNN Video NASA makes history as its space probe completes an historic	Why so many who doubt climate change here? (Opinion) - CNN.com
	flyby of <u>Pluto</u> . CNN's Robyn Curnow reports. NASA reveals new, close-up image of Pluto - CNN Video	CNN's John D. Sutter visits Woodward County, Oklahoma, which has one of the highest rates of skepticism about climate change in the United States.

NASA's John Spencer explains what can be learned from new images of Pluto taken by the New Horizons probe.

NASA's retro guide to future living - CNN.com

In 1975 NASA conducted a study into space colonies, commissioning artists to create vivid images of a glorious, technicolor future.

New images from New Horizons flyby around Pluto - CNN Video

CNN's Jennifer Gray details <u>NASA's latest mission</u> in sending the New Horizons spacecraft on a flyby trip around Pluto.

Former astronaut: A phenomenal day for Pluto - CNN Video

"We have now visited every planet in our solar system (...) what more can you ask for?" says NASA administrator and former astronaut Charles Bolden Jr.

Fmr. Astronaut: We've never been this close to Pluto - CNN Video

CNN's Erin Burnett speaks with former NASA astronaut Mike Massimino about a stunning new pictures of Pluto.

Olympics: Rio 2016's 'perfect storm' - CNN.com

With two months to go until the 2016 Olympic Games, Rio de Janeiro and Brazil is grappling with a public health emergency, a governmental meltdown and economic woes.

Head-on collision created Earth's moon? - CNN Video

Scientists now believe a head-on collision between Earth and another planet created our moon.

Country music legend Sonny James dies at 87 - CNN.com

Sonny James, who ruled the country charts for nearly 20 years, has died at the age of 87, according to a statement on his website.

Scott Kelly: 'I feel like I've lived my whole life up here' - CNN.com

Astronaut Scott Kelly is preparing to return to Earth on Tuesday after spending an unprecedented year on the International Space Station.

Girls feel less 'smart' by age 6, research says - CNN.com

By the age of 6, girls consider boys more likely to show brilliance and be more suited to "really, really smart" activities than their own gender, according to a study.