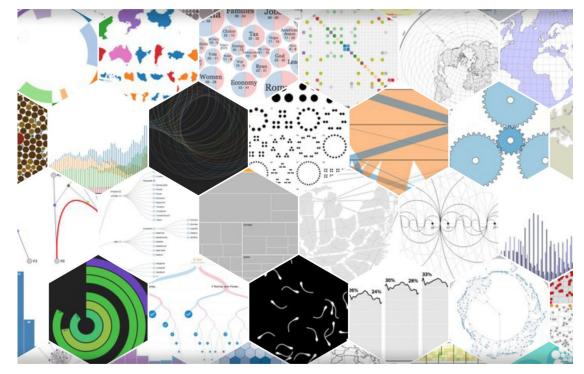
Interactive Online Visualization

Fall 2020 - Diego Garcia-Olano <u>www.diegoolano.com</u>

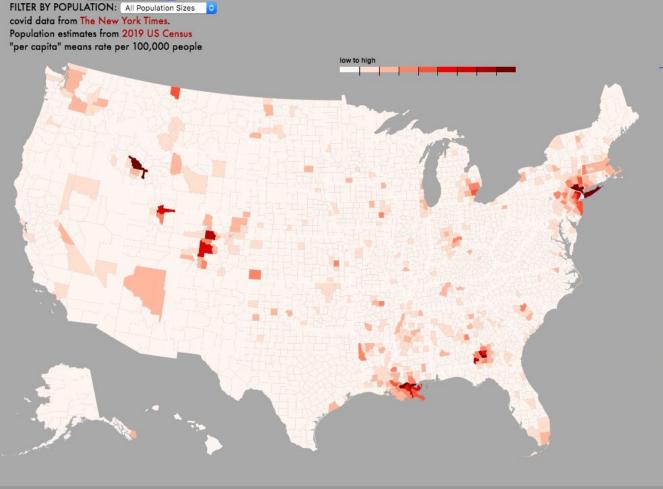




https://d3js.org

Cases Per Capita by county for COVID 19 (as of 4/5/2020)

LISTING FOR ALL STATES and ALL POPULATION SIZES



site: diegoolano.com/us per capita covid/

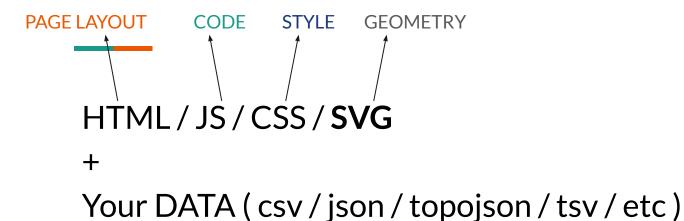
SHOW: Cases Per Capita FILTER BY STATE: All States

Open source Javascript library for manipulating documents (similar in nature to jQuery) and visualizing them.

*Nonproprietary framework with visualization components

(Usually) *not for Exploratory Data Analysis*, but rather for presenting findings to end users via an interactive web based visualization

HTML / JS / CSS / **SVG** + Your DATA (csv / json / topojson / tsv / etc)



HTML + Scalable Vector Graphics (SVG)

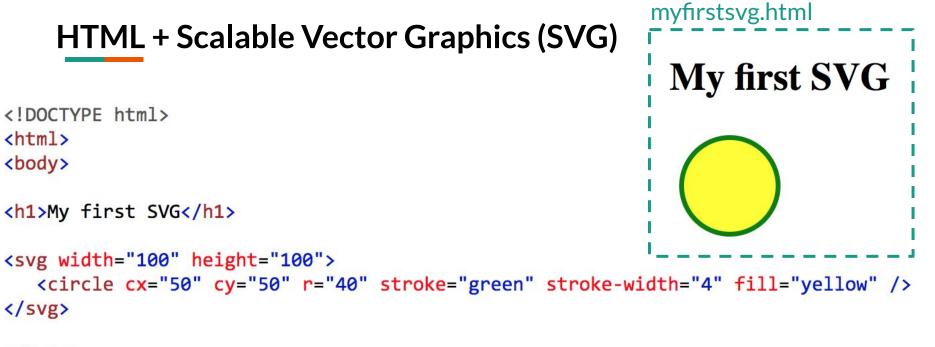
```
<!DOCTYPE html>
<html>
<body>
```

```
<h1>My first SVG</h1>
```

```
<svg width="100" height="100">
<circle cx="50" cy="50" r="40" stroke="green" stroke-width="4" fill="yellow" />
</svg>
```

</body> </html>

https://www.w3schools.com/graphics/svg_intro.asp



</body>
</html>

https://www.w3schools.com/graphics/svg_intro.asp

HTML + Scalable Vector Graphics (SVG)

```
<html>
<head>
        <script src='d3.v2.min.js'></script>
</head>
<body>
        <h1>my first SVG</h1>
</body>
<script>
d3.select("body")
  .append("svg")
  .attr("width",100)
  .attr("height",100)
  .append("circle")
  .attr("cx",50) .attr("cy",50) .attr("r",40)
  .attr("stroke", "green")
  .attr("stroke-width",4)
  .attr("fill","yellow");
</script>
</html>
```

my first SVG

http://diegoolano.com/ghosh/d3/circle.html

D3 basics Selections: d3.select("body").style("background-color", "black");







country,continent,population,GDPcap,GERD,growth Australia,Oceania,22319.07,40718.78167,2.21367,2.48590317 Austria,Europe,8427.318,42118.46375,2.74826,3.10741128 Belgium,Europe,10590.44,38809.66436,1.96158,1.89308521 Canada,America,33909.7,39069.91407,1.80213,3.21494841 Chile,America,17248.45,15106.73205,0.39451,5.19813626 Czech Republic,Europe,10286.3,25956.76492,1.52652,1.65489834 Denmark,Europe,5495.246,40169.83173,3.01937,1.04974368 Estonia,Europe,1335.347,22403.02459,1.44122,7.63563272 Finland,Europe,5366.482,37577.71225,3.84137,2.85477157

originally from: http://www.jeromecukier.net/stuff/data%20example/data-example2.html



country, continent, population, GDPcap, GERD, growth Australia, Oceania, 22319.07, 40718.78167, 2.21367, 2.48590317 Austria, Europe, 8427.318, 42118.46375, 2.74826, 3.10741128 Belgium, Europe, 10590.44, 38809.66436, 1.96158, 1.89308521 Canada, America, 33909.7, 39069.91407, 1.80213, 3.21494841 Chile, America, 17248.45, 15106.73205, 0.39451, 5.19813626 Czech Republic, Europe, 10286.3, 25956.76492, 1.52652, 1.65489834 Denmark, Europe, 5495.246, 40169.83173, 3.01937, 1.04974368 Estonia, Europe, 1335.347, 22403.02459, 1.44122, 7.63563272 Finland, Europe, 5366.482, 37577.71225, 3.84137, 2.85477157

```
d3.csv("data.csv",function(csv) {
    csv.sort(function(a,b) {return b.population-a.population;}); //
    svg.selectAll("circle").data(csv).enter()
    .append("circle")
    .attr("cx",function(d) {return x(+d.GERD);})
    .attr("cy",function(d) {return y(+d.growth);})
    .attr("r",function(d) {return r(Math.sqrt(+d.population));})
    .style("fill",function(d) {return c(d.continent);})
    .style("opacity",function(d) {return o(+d.GDPcap);})
    .append("title")
    .text(function(d) {return d.country;})
})
```

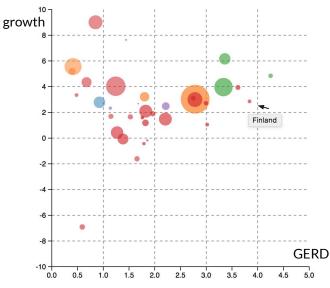
http://diegoolano.com/ghosh/d3/data-example2.html



country,continent,population,GDPcap,GERD,growth Australia,Oceania,22319.07,40718.78167,2.21367,2.48590317 Austria,Europe,8427.318,42118.46375,2.74826,3.10741128 Belgium,Europe,10590.44,38809.66436,1.96158,1.89308521 Canada,America,33909.7,39069.91407,1.80213,3.21494841 Chile,America,17248.45,15106.73205,0.39451,5.19813626 Czech Republic,Europe,10286.3,25956.76492,1.52652,1.65489834 Denmark,Europe,5495.246,40169.83173,3.01937,1.04974368 Estonia,Europe,1335.347,22403.02459,1.44122,7.63563272 Finland,Europe,5366.482,37577.71225,3.84137,2.85477157

```
d3.csv("data.csv",function(csv) {
    csv.sort(function(a,b) {return b.population-a.population;}); //
    svg.selectAll("circle").data(csv).enter()
        .append("circle")
        .attr("cx",function(d) {return x(+d.GERD);})
        .attr("cy",function(d) {return y(+d.growth);})
        .attr("r",function(d) {return r(Math.sqrt(+d.population));})
        .style("fill",function(d) {return c(d.continent);})
        .style("opacity",function(d) {return o(+d.GDPcap);})
        .append("title")
        .text(function(d) {return d.country;})
}
```

INSPECT SOURCE -> http://diegoolano.com/ghosh/d3/data-example2.html



Hello world (hands on)

STEP 1. Download the visualization via the following command line commands or in browser ("Save Page As")

wget http://diegoolano.com/ghosh/d3/data-example2.html or curl -O http://diegoolano.com/ghosh/d3/data-example2.html

Hello world (hands on)

STEP 1. Download the visualization via the following command line commands or in browser ("Save Page As")

wget http://diegoolano.com/ghosh/d3/data-example2.html or curl -O http://diegoolano.com/ghosh/d3/data-example2.html

STEP 2. Find and get the data, and then look at what you've done! wget http://diegoolano.com/ghosh/d3/data.csv

Hello world (hands on)

STEP 1. Download the visualization via the following command line commands or in browser ("Save Page As")

wget http://diegoolano.com/ghosh/d3/data-example2.html or curl -O http://diegoolano.com/ghosh/d3/data-example2.html

STEP 2. Find and get the data, and then look at what you've done! wget http://diegoolano.com/ghosh/d3/data.csv

STEP 3. Change something (either in the data or the code!)

Tutorials: https://github.com/d3/d3/wiki/Tutorials Observable (D3 in "Notebooks"): https://observablehq.com/@d3/learn-d3

Build from Visualizations from scratch

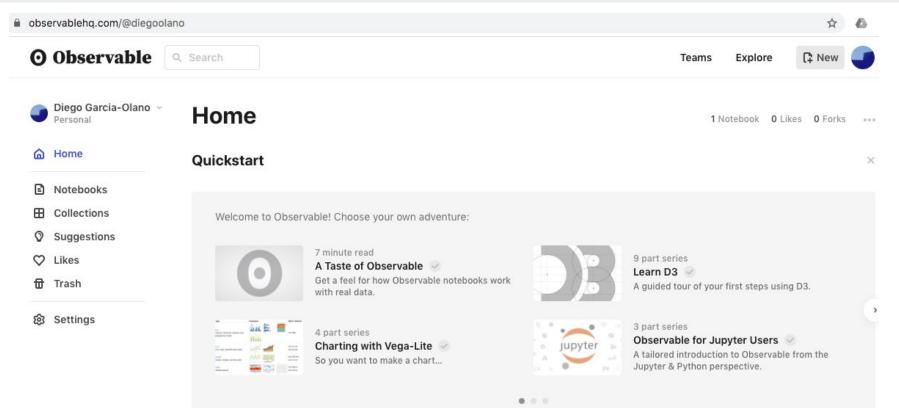
OR

- Find a visualization that roughly suits your needs

 (<u>https://bl.ocks.org/</u>, <u>http://blockbuilder.org/search</u>, etc)
- 2) Download it and figure out how it works
- 3) Put in your own data and change the code accordingly
- 4) Put it up somewhere for others to see (high five yourself)

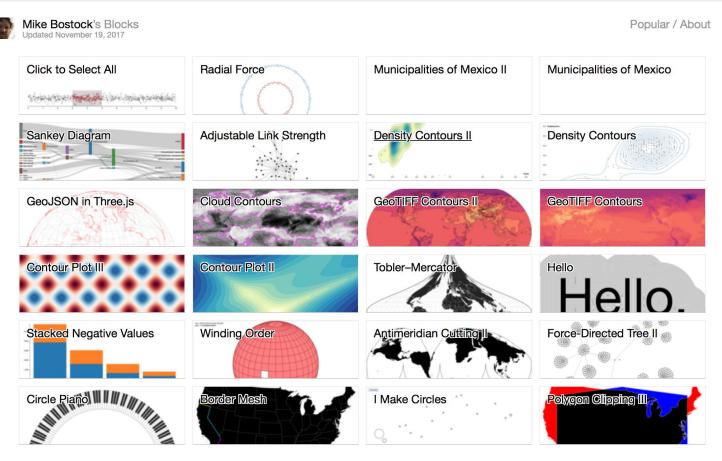
*right click -> Inspect Element to see code and change in browser (this doesn't save changes to code!) *for local development, you may need a web server (see <u>www.mamp.info</u> for a simple one)

(advanced) Observable HQ



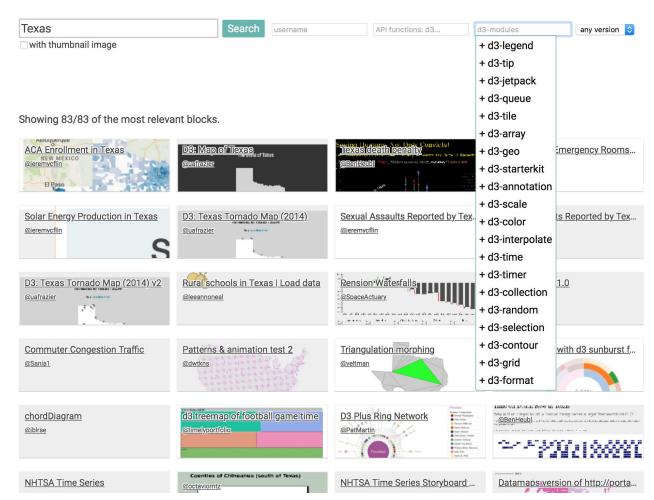
Examples: <u>https://observablehq.com/@krisrs1128/remembrances-of-states-past</u>

https://observablehq.com/@diegoolano/countries-winning-nobel-literature-prizes

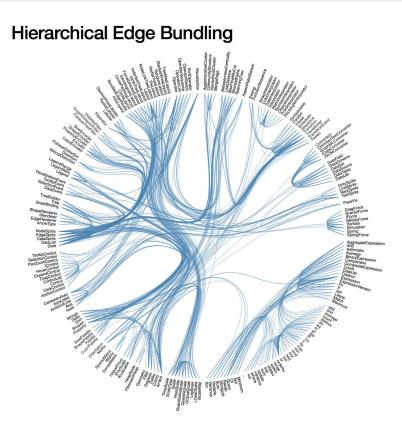


https://bl.ocks.org/mbostock

Search the Bl.ocks



http://blockbuilder.org/search



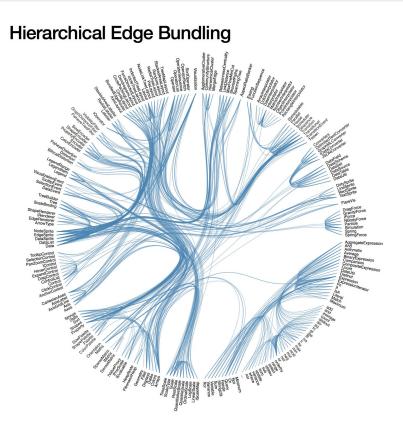
https://bl.ocks.org/mbostock/1044242

<!DOCTYPE html> <style> .node { font: 10px sans-serif; 3 .link { stroke: steelblue; stroke-opacity: 0.5; fill: none; pointer-events: none; 3 </style> <body> <script src="https://d3js.org/d3.v4.min.js"></script> <script> var diameter = 960, radius = diameter / 2, innerRadius = radius - 120; var cluster = d3.cluster() .size([360, innerRadius]); var line = d3.radialLine() .curve(d3.curveBundle.beta(0.85)) .radius(function(d) { return d.y; }) .angle(function(d) { return d.x / 180 * Math.PI; }); var svg = d3.select("body").append("svg") .attr("width", diameter) .attr("height", diameter) .append("g") .attr("transform", "translate(" + radius + "," + radius + ")");

d3.json("flare.json", function(error, classes) {
 if (error) throw error;

var root = packageHierarchy(classes)
 .sum(function(d) { return d.size; });

cluster(root);

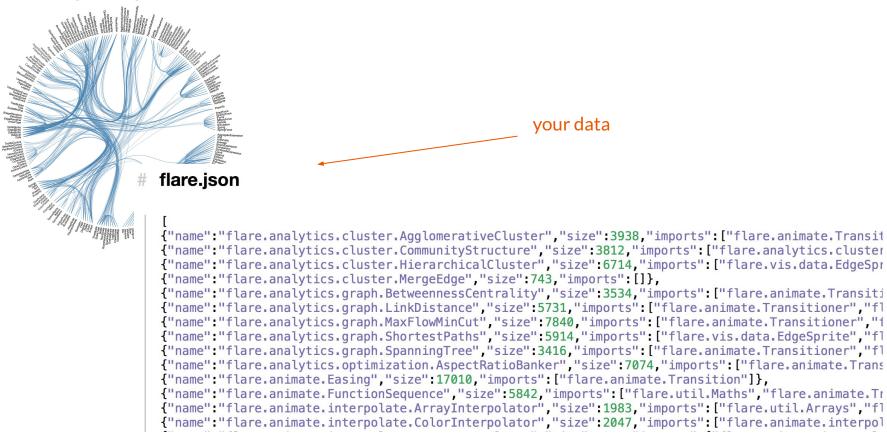


https://bl.ocks.org/mbostock/1044242

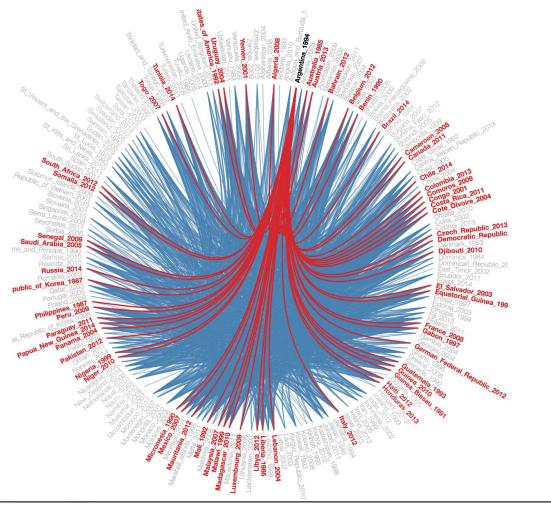
<!DOCTYPE html> <style> .node { font: 10px sans-serif; 3 .link { stroke: steelblue; stroke-opacity: 0.5; fill: none; pointer-events: none; 3 </style> <body> <script src="https://d3js.org/d3.v4.min.js"></script> <script> var diameter = 960, radius = diameter / 2, innerRadius = radius - 120; var cluster = d3.cluster() .size([360, innerRadius]); var line = d3.radialLine() .curve(d3.curveBundle.beta(0.85)) .radius(function(d) { return d.y; }) .angle(function(d) { return d.x / 180 * Math.PI; }); var svg = d3.select("body").append("svg") .attr("width", diameter) .attr("height", diameter) .append("q") .attr("transform", "translate(" + radius + "," + radius + ")"); var link = svg.append("q").selectAll(".link"), node = svg.append("g").selectAll(".node"); your data d3.json("flare.json", function(error, classes) { if (error) throw error; var root = packageHierarchy(classes) .sum(function(d) { return d.size; });

cluster(root);

Hierarchical Edge Bundling



https://bl.ocks.org/mbostock/1044242

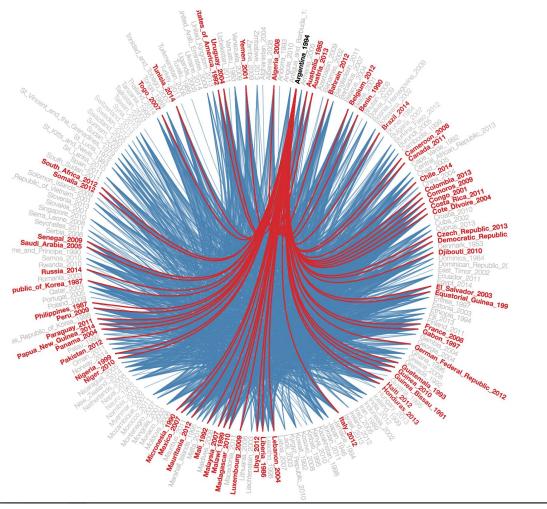


diegoolano.com/ir/constitutions-bundle.html

A text analysis of the constitutions of individual countries. code at github

Argentina_1994

Similarity Country United_States_of_America_1992 view 58 constituion 45 Congo_2001 view constituion 39 Micronesia_1990 view constituion 39 Lebanon_2004 view constituion 33 Saudi_Arabia_2005 view constituion 33 Libva 2012 view constituion 30 Belgium_2012 view constituion 29 Canada_2011 view constituion 29 Mexico_2007 view constituion 28 Czech_Republic_2013 view constituion 25 Mauritania_2012 view constituion 23 Australia_1985 view constituion 23 Uruguay_2004 view constituion 23 Malawi_1999 view constituion 23 Cameroon 2008 view constituion 23 Gabon_1997 view constituion 21 Nigeria 1999 view constituion 21 Honduras_2013 view constituion 21 Djibouti_2010 view constituion German_Federal_Republic_2012 view 20 constituion 20 Luxembourg_2009 view constituion 20 France_2008 view constituion 19 Cote_Divoire_2004 view constituion 18 Costa_Rica_2011 view constituion 18 Mali_1992 view constituion 18 El_Salvador_2003 view constituion 18 Italy_2012 view constituion 18 Russia 2014 view constituion 17 Malaysia_2007 view constituion 17 Comoros 2009 view constituion 17 Austria_2013 view constituion 17 Togo_2007 view constituion 16 Brazil_2014 view constituion 16 Peru 2009 view constituion 16 Equatorial_Guinea_1995 view constituion 15 Colombia 2013 view constituior



A text analysis of the constitutions of individual countries. code at github

viz 101:

Size Matters Color Matters

What's the story?

See Tufte https://www.edwardtufte.com/tufte/books_ ei

diegoolano.com/ir/constitutions-bundle.html

A text analysis of the similarity of individual state's environmental laws in Mexico. <u>full report</u> in Simultech's 2015 "Special Session on Applications of Modeling and Simulation to Climatic Change and Environmental Sciences"

Estado de Mexico

Baja California Sur

Oaxaca bases peacc

Baja California

Yucatan

Veracruz

Chiapas Hidalgo

Coahuila Quintana Roo

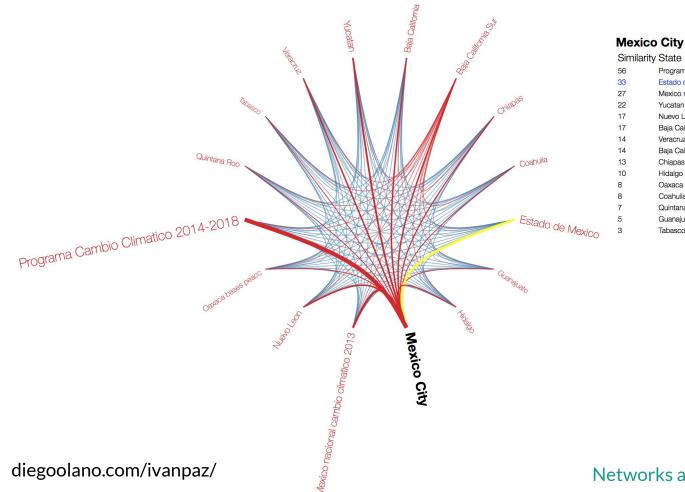
Guanajuato

Tabasco

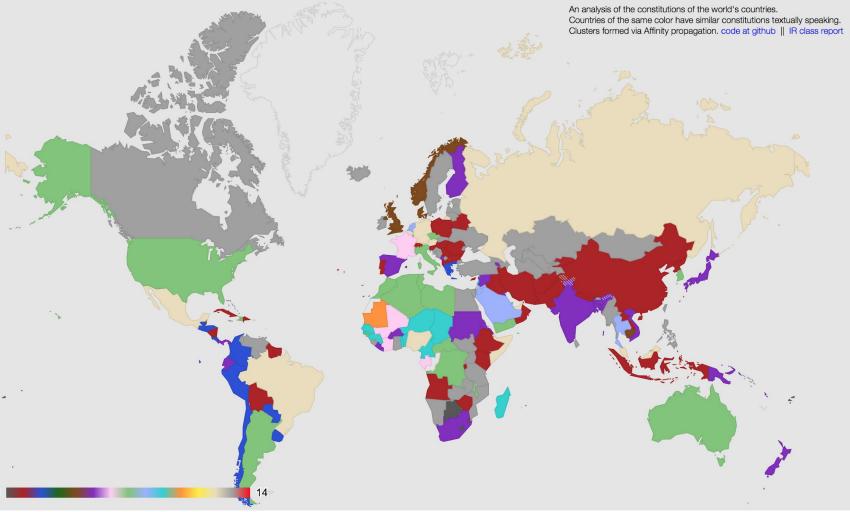
Nuevo Leon

Programa Cambio Climatico 2014-2018

Mexico nacional cambio climatico 2013



Networks are pretty bad for conveying info



Exact same data as presented before !

http://diegoolano.com/ir/constitutions-map.html

2012 LIC DECIDENTI	L ELECTION DEGLUTO	
2012 US PRESIDENTIA	AL ELECTION RESULTS	
BLUE ISLANDS		
 Jefferson, AL 	 Glacier, MT 	
 Conecuh, AL 	 Roosevelt, MT 	
 Coconino, AZ 	 Missoula, MT 	
 Alachua, FL 	 Big Horn, MT 	
• St. Lucie, FL	 Buncombe, NC 	
Clarke, GA	 Mecklenburg, NC 	
 Liberty, GA 	 Rolette, ND 	
Hawaii, HI	Benson, ND	
Kauai, HI	Steele, ND	
 Maui, HI 	Thurston, NE	
 Maui, HI 	Washoe, NV	
• Maui, HI	Monroe, NY	
Maui, HI	Richmond, NY	
Honolulu, HI	• Franklin, OH	
Kauai, HI	Montgomery, OH	
Latah, ID	Athens, OH	
Blaine, ID	Hamilton, OH	
Putnam, IL Chammaian II	Allegheny, PA Daughin DA	
 Champaign, IL Jackson, IL 	 Dauphin, PA McCormick, SC 	
 Jackson, IL Alexander, IL 	 McCornnick, SC Buffalo, SD 	
 Delaware, IN 	 Shannon, SD 	
 Marion, IN 	 Todd, SD 	
 Warlon, IN Vigo, IN 	 Clay, SD 	
 Monroe, IN 	 Davidson, TN 	· · · · · · · · · · · · · · · · · · ·
 Perry, IN 	 Dallas, TX 	
 Douglas, KS 	 Presidio, TX 	
 Jefferson, KY 	• Travis, TX	
 Franklin, KY 	 Val Verde, TX 	County: Travis, TX
• Elliott, KY	 Jefferson, TX 	- cities: Austin, Del Valle, Leander, Man
• Fayette, KY	Harris, TX	- socioeconomic indicators (blue mean
Caddo, LA	• Bexar, TX	Population Median earnings Income i
 Orleans, LA 	 Westmoreland, VA 	
 Dukes, MA 	 Northampton, VA 	1024266 30442 67.77
 Nantucket, MA 	Roanoke City, VA	Below Federal Poverty Threshold Chil
 Gogebic, MI 	 Norfolk City, VA 	16.2 21.4
 Isabella, MI 	 Danville City, VA 	
 Muskegon, MI 	San Juan, WA	less than highschool at least high scho
Marquette, MI	• Forest, WI	13.7 86.3
 Kittson, MN 	 Menominee, WI 	Construction/repair Farming/fishing/fo
• Boone, MO	• Winnebago, WI	
 Jasper, MS 	Ashland, WI	A 10
• Jefferson Davis, MS	• Door, WI	- public health indicators (blue means
• Pike, MS	• Teton, WY	male female adultobese airpollutionq a
		51.6 48.4 25 4 5
HIGHEST DEMOCRA	I VOTE COUNTS	freelunch gini healthcosts healthyfood 44 0.49 9982 74
• Los Angeles,CA (16		noenglish physicianratio recfac rural si
 Cook IL (1439123 y 	otes)	

- Cook,IL (1439123 votes)
- King,WA (599796 votes)
 Wayne,MI (595253 votes)
- Harris,TX (585451 votes)

Counties States Total Votes Votes per County Overall Democrats 686 62210233 90685.47 Republicans 2427 58788428 24222.67 Democrats(231540) vs GOP(139503) with 62.40 % of vote close nchaca, Manor, Mc Neil, Pflugerville, Spicewood ns value is in top 3rd Quartile range, red means in lower 1st Quartile) index Education Index Gini Coeff. White African Asian Latino Native American Other 87.38 0.487 50.5 8.1 5.7 33.5 0.3 2 ildren under 6 in poverty Childern living in poverty Adults 65 and up in poverty 21.4 ool at least bachelors graduate degree Preschool Enrollment School enrollment 43.5 15.9 46.6 75 forestry Management/professional Production/transport Sales/office Service 43.8 16 6.6 23.9 s value is in lower 1st quartile, red means in higher 3rd Quartile) ambulatorycare dentistratio diabectic drivealone excsdrinking fairpoorhealth fastfoodresp 0.05 51 d illiteracy lowbirthrate mammography mentaldays motordeath mphratio noemotionalsupport 12.9 68.2 3.3 12 0.07 22 7.4

noenglish physicianratio recfac rural sickdays singleparent smokers stdsper100 teenbirthrate unemployed uninsured.x violentcrime 13.7 0.09 11.1 7 2.8 33 17 599 54 6.9 24 444

Blue islands: election results and socio-economic data on a map

He	eaviest GOP (90% up)	
÷	King, TX (96.53%) Wibaux, MT (94.39%) Roberts, TX (94.23%) Madison, ID (94.17%)	
•	Franklin, ID (94.11%)	
•	Sterling, TX (93.67%)	
•	Glasscock, TX (92.28%)	
•	Hansford, TX (91.88%)	
•	Oldham, TX (91.72%) Rich, UT (91.62%)	
:	Ochiltree, TX (91.48%)	
:	Grant, NE (91.48%)	
	Millard, UT (91.25%)	
	Uintah, UT (91.23%)	
	Wallace, KS (91.17%)	
	Leslie, KY (91.11%)	
•	Morgan, UT (91.01%)	
	Borden, TX (91.01%)	
•	Sevier, UT (90.85%)	
•	Duchesne, UT (90.77%)	
•	Motley, TX (90.73%)	
•	Hayes, NE (90.44%)	
•	Garfield, MT (90.41%)	
•	Piute, UT (90.39%)	
•	Cimarron, OK (90.39%)	
•	Shackelford, TX (90.29%)	
•	Hartley, TX (90.28%)	
•	Blaine, NE (90.24%)	
•	Utah, UT (90.01%)	
He	eaviest DEM (85% up)	
•	Shannon, SD (93.95%)	
•	Bronx, NY (91.64%)	
	Prince George's, MD (90.78%)	
•	Petersburg City, VA (90.40%)	
•	Jefferson, MS (89.06%)	
•	Baltimore City, MD (88.74%)	
•	Claiborne, MS (88.40%)	
	Macon, AL (87.25%) Starr, TX (86.94%)	
:	Menominee, WI (86.93%)	
:		
:	Philadelphia, PA (85.85%)	
•	1 maderpma, FA (05.0570)	

- Philadelphia, PA (85.85%)
 New York, NY (85.25%)
- Clayton, GA (85.19%)

HIGHEST GOP VOTE COUNTS

- Maricopa, AZ (654835 votes)
- Orange,CA (541592 votes)
- Tarrant,TX (348686 votes)
- Riverside,CA (290227 votes)
- Duval,FL (211553 votes)
- Salt Lake,UT (198739 votes)
- Collin,TX (195933 votes)

diegoolano.com/electionmap/

	End Of Year Albums 2016	FILTER BY GENRE BANDS by: abc rank ALL 2814
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	End Of Year Albums 2016	ALL 28 1 4 CLASSICAL 2 CHAINZ ELECTRONIC 21 SAVAGE EXPERIMENTAL 75 DOLLAR BILL FOLKCOUNTRY 80BINK HIPHOP A TRIEE CALLED QUEST INDIE A-WA JAZZEVINK A.B. ORIGINAL METAL ANOHNI POP ASAP FERG PUNK AURORA R&BASOLI AARON LEE TASJAN RCOK AB REIMOLD SLEEFERS ABRA
11 - 1 13 - 1 13 - 1 14 - 1 15 - 1 16 - 1 18 - 18 - 1 18 - 1 1		AGAINST MEI AGNES OBEL ALA.NI ALEX.CAMERON ALICA KEYS ALICAT CUT ALICA KEYS ALICAT CUT ALICAT CUT ALICAT CUT ALICAT CUT ANDERSON FOOTBALL AMANESIA SCANNER ANDERSON FOOTBALL AMMESIA SCANNER ANDERW BIRD ANDERW BIRD ANDERW BIRD ANDERW BIRD ANDERW BIRD ANDY STOTT ANDERW BIRD ANDY STOTT ANDERW BIRD ANDY STOTT ANDERW BIRD ANNA MERDTH ANNA RERDTH ANNA RERDTH ANNA GRANDE BITCHER - EISEG BADBACHARD BITCHER - EISEG BADBACHARD BITCHE CHICAGO KID BRONCHO BALVER BASFATHER BASFATHER BASFATHER BASANCI AND COMPOSI BAND OF HORSES BARBAR HANNIGAN BESTAND BIOLAY BERVARD FANNING BETVONCE BETVONCE BIC SCAMES BICHEF BILL BAIRD BICHIN BAJAS & BONNIN

A Tribe Called Quest - We Got It From Here... (Hip-Hop) IN 28 OF 36 LISTS. HIGHEST RANK: 1 (GVSB) AVG RANK: 13 LISTEN !

MUSIC SITES THAT LIKED THIS ALBUM ALSO LIKED: 1. FRANK OCEAN - BLONDE (R&B-SOUL) 2. DAVID BOWIE - BLACKSTAR (ROCK) 3. RADIOHEAD - A MOON SHAPED POOL (ROCK)

ABOUT

4. SOLANGE - A SEAT AT THE TABLE (R&B-SOUL) 5. ANGEL OLSEN - MY WOMAN (INDIE) 6. BEYONCE - LEMONADE (R&B-SOUL)

7. DANNY BROWN - ATROCITY EXHIBITION (HIP-HOP) 8. MITSKI - PUBERTY 2 (INDIE) 9. KANYE WEST - THE LIFE OF PABLO (HIP-HOP)

COMPOSURE SES INIGAN ES DLAY INING WIZARDS SLEEVE & BONNIE PRINCE BILL TAIN GE **BOB DYLAN** BON IVER BONNIE RAITT BOTANY BRANDY CLARK BRIAN ENO BRIAN FALLON BRIGID MAE POWER BROODS BROTHERS OSBORNE

Aggregating end of year lists for music discovery

2017 MUSIC FESTIVALS

2017 MU	JSIC FEST	IVALS		NON-UNIQUE	ALE SORT BY:	% FEMALE # UNIQU % FEMALE+MIXED % UNIQU	IE BANDS			
4/14, CA COACHELLA © LADY GAGA - LORDE - THE XX - THE HEAD AND THE HEART - PHANTOGRAM - KEHLANI - LITTLE DRAGON - BANKS - GROUPLOYE - TOYE LO © ROISIN MURPHY - CYSTAL CASTLES - KIIARA © BROODS © MAYA JANE COLES - WARPAINT © NAO - OH WONDER - SOFI TUKKER - ZIPPER CLUB - MINDS - THE ATOMICS © HINDS - THE LEMON TWIGS - NORA EN PURE © HANNAH WANTIS - ANNA LUNCE - GRACE MITCHELL © MOSS KENA	JJSIC FESTI 4/28, IA JAZZFEST • MEGHAN TRAINOR • LORDE • ALABAMA SHAKES • PATI LABELLE • CORINNE BAILEY RAE • IRMA THOMAS • ELLE KING • ELLE KING • THE LONE BELLOW • HERB AJPERT & LANI HALL - MARGO PRICE • JOHNNYSWIM • LAKE STREET DIVE • MS. LISA FISCHER & GRAND BATON • ERICA CAMPBELL OF MARY MARY	5/3, FL SUNFEST © TORI KELLY © RACHEL PLATTEN © TINASHE — THE STRUMBELLAS — THE NAKED AND FAMOUS © AMBROSIA — ILLIE MAE © LEILANI WOLFGRAMM © TAYLA PARX © OCEAN PARK STANDOFF © MADAME MAYHEM © MERESHA © ROANOKE	5/12, GA SHAKYKNEES – THE XX – LCD SOUNDSYSTEM © PIXIES – SYLVAN ESSO – SHOVELS & ROPE – WARPAINT © FAMILY AND FRIENDS – PINEGROVE – LO MOON – MARCARET GLASPY – ZIPPER CLUB – CON BRIO © AMYTHYST KIAH	NON-UNIQUE S/19, AL HANGOUT	5/26, WA SASQUATCH	% FEMALE # UNIQU	IE BANDS	6/2, NY GOVBALL - LORDE @ BEACH HOUSE - THE HEAD AND THE HEART - TOVE LO - PHANTIOGRAM - BANKS - CHARLI XCX - KEHLANI - THE STRUMBELLAS - DUA LIPS - MUNA - MUNA	6/8, TN BONNAROO - LORDE - THE XX - THE HEAD AND THE HEART - TOYE LO - CRYSTAL CASTLES - TEGAN AND SARA - THE STRUMBELLAS - DUA LIPA - THE STRUMBELLAS - DUA LIPA - SNAILS - MARGO PRICE © CAM - MANDOLIN ORANGE - NONAME - LEON © REZZ © ANGELIQUE KIDJO © DEAP VALLY © VANIC - JULY TALK © TURKUAZ - LUCY DACUS - KHRUANGBIN - THE LEMON TWIGS - TWIN LIMB © RIVER WHYLESS - ALEXANDRA SAVIOR - WELLES	6/15, DE FIREFLY © KESHA — PHANTO — THE NAK — BANKS — MISTERW — THE STRL © NAHKO. FOR THE STRL © NAHKO. FOR THE STE — DAYA — MUNA — MAGGIE — SOFI TUK — ANNA LL © MEG MA — SUNFLON — ARIZONY — ELOHIM © FICKLE FI © SHAED © ROZES — SAVOIR / © SALT CAT © WALKER © OWEL © THE STEP © THE LAW © REPEAT R © LOUIE LC © VITA ANI © SHORT S © DUDE RA AT THE ROC
© TACOCAT © ALISON SWING © SHURA © HONEY DIJON © JEN FERRER										© JOIE KAT © ANNA SI

ALL FEMALE

CHRONOLOGICAL NUMBER OF BANDS

UNIQUE TO FESTIVAL

@ ELI & FUR

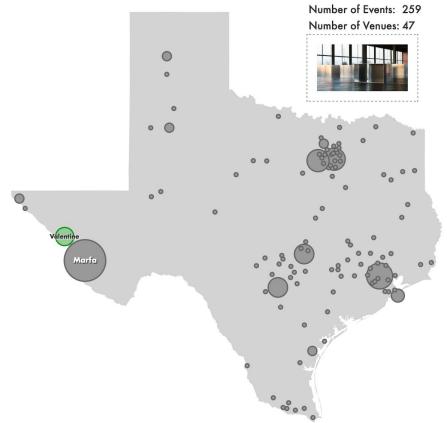
ARTICLE LINK WORDS: ROB MITCHUM VIZ: DIEGO GARCIA-OLANO BAND CENTRIC VIZ

Pitchfork: Gender analysis of summer music festivals

diegoolano.com/robmitchum/pitchfork/festivals.html

Glasstire: Marfa

Q



Texas Art Events by city/venue for the last 10 years

Showing ALL Results #events venue Chinati Foundation 52 E 10 - 6 2.007 2.008 2,009 2,010 2,011 2,012 2,013 2,014 2,015 2,016 2,017 http://glasstire.com/venues/chinati-foundation September 2017 Chinati Weekend May 2017 L.A. Dance Project at The Chinati Foundation September 2016 Chingti Weekend 2016 July 2016 **Robert Irwin Opening Event** April 2016 Jen Rosenblit: Clap Hands January 2016 Sunset at Chinati September 2015 Chinati Weekend 2015 September 2015 Charlotte Posenenske and Peter Roehr August 2015 Sunrise at Chinati July 2015 Andrew May: Unset November 2014 Sunset at Chinati October 2014 Chinati Weekend 2014 Neighbor Notes: Modern Chamber Music by August 2014 **Mexican Composers** Zoe Leonard: 100 North Nevill Street May 2014 April 2014 Marfa Community Day March 2014 Chinati Presents: The xx October 2013 Albrecht Dürer: Five Woodcuts and Five Etchings October 2013 Chinati Weekend - Donald Judd: Prints August 2013 Jered Sprecher at the Locker Plant

http://www.glasstire.com/infographics/events/

GLASSTIRE ARTISTS

SELECT A CITY, VENUE, OR ARTIST TO BEGIN.

WHERE	VENUES [676]		
ALL CITIES	ALL VENUES		
HOUSTON	NAME	EV	A
DALLAS	MUSEUM OF FINE ARTS,	235	32
AUSTIN	HOUSTON - MFAH	200	
SAN ANTONIO	LAWNDALE ART CENTER	222	34
FORT WORTH	500X GALLERY	182	27
MARFA	CONDUIT GALLERY	169	17
EL PASO	ART LEAGUE HOUSTON	161	24
GALVESTON	MENIL COLLECTION	157	23
DENTON			25
LUBBOCK	CO-LAB PROJECTS	152	
ABILENE	MCKINNEY AVENUE CONTEMPORARY (THE MAC)	151	29
ADDISON	BLUE STAR CONTEMPORARY	150	36
ALLEN	ART MUSEUM		
ALVIN	MODERN ART MUSEUM OF	146	19
AMARILLO	FORT WORTH		
ARLINGTON	BOX 13 ARTSPACE	146	27
BAYTOWN	GALVESTON ARTS CENTER	142	19
BEAUMONT	CONTEMPORARY ARTS	135	27
BEEVILLE	MUSEUM HOUSTON - CAMH		
BELLAIRE	MCNAY ART MUSEUM	134	22
BLANCO BOERNE	CENTRALTRAK	134	25
BRECKENRIDGE	ARTPACE	125	19
BRENHAM	DALLAS MUSEUM OF ART	120	18
BROWNSVILLE	HOUSTON CENTER FOR	117	17
BRYAN	CONTEMPORARY CRAFT		
CANYON	BLANTON MUSEUM OF ART	115	23
CEDAR HILL	UT VISUAL ARTS CENTER	114	20
CEDAR PARK	(VAC)		
CLEVELAND,	WALLY WORKMAN GALLERY	110	70
COLLEGE STATION COLUMBUS	HOUSTON CENTER FOR	106	19
COMMERCE	PHOTOGRAPHY		
CONROE	CENTER FOR CONTEMPORARY	105	12
CORPUS CHRISTI	ARTS - ABILENE		
CORSICANA CYPRESS	REDBUD GALLERY	104	12
DENISON	BLAFFER ART MUSEUM	104	21
DUNCANVILLE	HIRAM BUTLER GALLERY	103	92
EDINBURG	HOOKS-EPSTEIN GALLERIES	102	81
FARMERS BRANCH	EL PASO MUSEUM OF ART	102	19
FAYETTEVILLE	ART PALACE	101	92
FREDERICKSBURG	PHOTOGRAPHS DO NOT	100	13
FRISCO	BEND GALLERY		
GARLAND	MOODY GALLERY	100	65
GEORGETOWN	G GALLERY	100	19
GRANBURY	INMAN CALLERY	00	45

		ARTISTS [5991]	
		ALL ARTISTS	
R	CITY	NAME	EVA
	HOUSTON	EMILY SLOAN	45
		ANDY WARHOL	42
46	HOUSTON	RYDER RICHARDS	38
70	DALLAS	PATRICK RENNER	38
79	DALLAS	BILL DAVENPORT	38
49	HOUSTON	BENITO HUERTA	38
32	HOUSTON	MARGARET MEEHAN	32
54	AUSTIN	EMILY PEACOCK	32
94	DALLAS	CODY LEDVINA	32
		ORNA FEINSTEIN	31
61	SAN ANTONIO	LANCE LETSCHER	31
95	FORT WORTH	AUTUMN KNIGHT	31
		ADELA ANDEA	31
75	HOUSTON	SHARON KOPRIVA	30
96	GALVESTON	NOAH SIMBLIST	30
76	HOUSTON	NATHAN GREEN	30
		STEPHEN LAPTHISOPHON	29
20	SAN ANTONIO	BILLY HASSELL	29
	DALLAS	AARON PARAZETTE	28
	SAN ANTONIO	ELAINE BRADFORD	27
	DALLAS	ARIANE ROESCH	27
78	HOUSTON	ROBERT PRUITT	26
	AUSTIN	KEN LITTLE	26
	AUSTIN	JEFF GIBBONS	26
0/	AUSTIN	TOM ORR	25
0	AUSTIN	TOBY KAMPS	25
92	HOUSTON	LUDWIG SCHWARZ	25
		KATIE MARATTA	25
28	ABILENE	JULES BUCK-JONES	25
		HEYD FONTENOT	25
	HOUSTON	RENE CRUZ	24
	HOUSTON	JUSTIN BOYD	24
	HOUSTON	JOHN POMARA	24
	HOUSTON	JOEY FAUERSO	24
	EL PASO	VINCENT FALSETTA	23
_	HOUSTON	RUSTY SCRUBY	23
37	DALLAS	ROBERT RAUSCHENBERG	23
5	HOUSTON	RAUL GONZALEZ	23
	HOUSTON	MARI OMORI	23
	HOUSTON	JULIE SPEED	23

FROM: 2007 O TO: 2017 O RESET

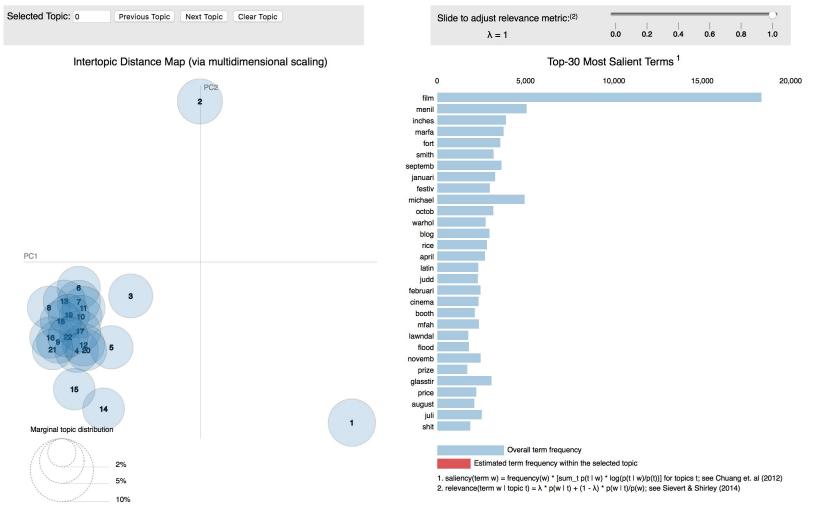
LANCE LETSCHER VISIT ARTIST'S GLASSTIRE PAGE

DATEA	EVENT	VENUE	CITY
SEP 2017	LANCE LETSCHER: COLLAGE AND DRAWING	THE LOUISE HOPKINS UNDERWOOD CENTER FOR THE ARTS- LHUCA	LUBBOCK
FEB 2017	LANCE LETSCHER: NEW WORK FROM THE LATE MIDDLE AGES	STEPHEN L. CLARK GALLERY	AUSTIN
OCT 2015	LANCE LETSCHER: BE MY LIFE'S COMPANION	CONDUIT GALLERY	DALLAS
SEP 2015	LANCE LETSCHER: NEW WORK	STEPHEN L. CLARK GALLERY	AUSTIN
MAR 2015	LANCE LETSCHER: PARALLEL UNIVERSE	MCMURTREY GALLERY	HOUSTON
JUN 2014	LONGITUDE/LATITUDE: PART I	CONDUIT GALLERY	DALLAS
OCT 2013	LANCE LETSCHER: PREGUNTA NUMERO UNO	CONDUIT GALLERY	DALLAS
JAN 2013	MAJORITY RULES: A DECADE OF CONTEMPORARY ART ACQUISITIONS	MCNAY ART MUSEUM	SAN ANTONIO
OCT 2012	LANCE LETSCHER: WOODPECKER MONOLOGUE	MCMURTREY GALLERY	HOUSTON
DEC 2011	LANCE LETSCHER: WORK FROM THE MIDDLE AGES	D BERMAN GALLERY	WIMBERLEY
OCT 2011	LANCE LETSCHER: THE NEEDLE IN THE HAY	CONDUIT GALLERY	DALLAS
MAY 2011	COLLAGE	KINZELMAN ART CONSULTING	HOUSTON
APR 2011	TED LARSEN, LANCE LETSCHER, AND RUSTY SCRUBY: PIECE BY PIECE	MCMURTREY GALLERY	HOUSTON
APR 2011	BEEVILLE ART MUSEUM: CELEBRATING 10 YEARS OF ART AND	BEEVILLE ART MUSEUM	BEEVILLE
MAR 2011	GRAND RELOCATION CELEBRATION	D BERMAN GALLERY	WIMBERLEY
MAR 2011	THE GUN & KNIFE SHOW	CENTRALTRAK	DALLAS
JAN 2011	10TH ANNIVERSARY GROUP SHOW	D BERMAN GALLERY	WIMBERLEY
NOV 2010	LANCE LETSCHER: RECENT WORK FROM THE MIDDLE AGES	MCMURTREY GALLERY	HOUSTON
SEP 2010	88, ORGANIZED BY ANDY COOLQUITT	DOMY BOOKS AUSTIN	AUSTIN
MAY 2010	LANCE LETSCHER: THE PERFECT MACHINE	D BERMAN GALLERY	WIMBERLEY
JAN 2010		CONDUIT GALLERY	DALLAS
DEC 2009	BACK IN RED	MCMURTREY GALLERY	HOUSTON
AUG 2009	ARTHOUSTON 2009: JANE EIFLER & JON VON LETSCHER	MCMURTREY GALLERY	HOUSTON
JUN 2009	LETSCHER, LAPTHISOPHON, AND OTTINGER	CONDUIT GALLERY	DALLAS
JAN 2009	WHAT'S MY LINE?	MCMURTREY GALLERY	HOUSTON
NOV 2008	COLLAGE: MORE AND LESS	WILLIAMS TOWER GALLERY	HOUSTON
NOV 2008	LANCE LETSCHER: MACHINES, BUILDINGS, AND BOOKS	MCMURTREY GALLERY	HOUSTON
JUN 2008	LANCE LETSCHER: INDUSTRY AND DESIGN	D BERMAN GALLERY	WIMBERLEY
MAY 2007	LANCE LETSCHER	CONDUIT GALLERY	DALLAS
APR 2007	WORD PLAY	NANCY WILSON SCANLAN GALLERY- ST. STEPHEN'S EPISCOPAL SCHOOL	AUSTIN
MAR 2007	BOOK WORKS	GALVESTON ARTS CENTER	GALVESTON

SHAREABLE LINK TO THIS PAGE

Texas Artists: whose shown the most?

http://www.glasstire.com/infographics/artists/



Glasstire All Articles Topic Modeling

http://www.diegoolano.com/glasstire/words/

Top Associated 18 articles for Novembe same sentence	Top Associated r 2009 same sentence/near	Top Associated same sentence/near/article	Top Associated prior II next II same article only (not near	Top Associated combined metric	Summary comparison		2015
2009-11-13 - statesman.com - 2009-11-13 - statesman.com - 2009-11-05 - chron.com - Ext 2009-11-05 - chron.com - Met 2009-11-13 - statesman.com - 2009-11-13 - statesman.com - 2009-11-13 - statesman.com	Legislator vows daily motior Lawmakers seek to help the House battles cockfighting 1 Transit board shake up clos Rodriguez finds more succe Perry vetoes pre k expansic Special session puts kink in How central texas lawmake Lawmaker gets zinged for n State board vows to save ci eacher still unable to be in co ro Digest 206277.php link Capitol roundup link A food stamp fingerprint feu Democrat wins state house	n to remove house speak link disabled get state cont link link er to final passage link ses in fourth term 1 link no college health chan 1 link lawmakers plans link rs spent campaign donatio link gree about worker paymen link ot having web site link rristmas chavez link purt for sex 206073.php link	Jan 2002 Jan 2003 Jan 2003 Jan 2004 Jan 2005 Jan 2005	Jan 2001 Jan 2008 Jan 2008 Jan 2008 Jan 2009 Jan 2010 Jan 2010	Jan 2011 Jan 2012 Jan 2013 Jan 2014 Jan 2014 Jan 2015 Jan 2015	SEARCH RESULTS: FOR "EDDIE RODRIGUEZ" FOUND: 362 ARTICLES FROM 6 DIFFERENT SOURCES AND 6226 ENTITIES DISCOVERED [LOCATION: 882, PERSON: 2632, MISC: 411, ORGANIZATION: 1945, POLT 269, BILL: 87] OF WHICH 57 ARE CURRENTLY SHOWING FILTER BY DATE: FROM TO APPLY DATE FILTER FILTER BY SOURCE: 9 AUSTIN AUSTIN STATESMAN (133)	TICIAN:

Politicians:	Organizations:	Persons:	Locations:	Bills:	Misc:
Dawnna Dukes - 17	Tesla - 8	Ciro Rodriguez - 6	AUSTIN - 52	House Bill	Travis County -
Elliott Naishtat - 16	Milford Superior Court - 7	Hugh Keefe - 6	East Austin - 10	3301 - 2	27
Mark Strama - 14	Farm to Table Caucus - 5	Richard Raymond - 5	San Antonio - 8	House Bill	Austin Democrat
Tom Craddick - 14	Calendars Committee - 3	Lulu Flores - 4	Milford - 6	506 - 2	- 9
Lon Burnam - 12	Edgewood - 3	Gene Meyer - 4	Texas House - 6	House Bill	urban - 8
Donna Howard - 12	Mexican American Legislative	Democrats Eddie Lucio III - 4	Springdale Farm - 4	3033 - 1	Austin
Kirk Watson - 12	Caucus - 3	Terri Hodge - 4	Nautica - 3	Senate Bill	Democratic - 4
Craig Eiland - 9	University of Texas - 3	Lee Leffingwell - 4	Central Texas - 3	1715 - 1	American-owned
Jessica Farrar - 9	Houston - 3	Paul Moreno - 4	Dallas - 3	House Bill	- 2
Lois Kolkhorst - 9	Edwards Aquifer Authority District -	Terry Wilke - 3	Fort Worth; - 2	1677 1	Mexican-
Patrick Rose - 8	2	James Kroner - 3	Wichita - 2	HB 213 - 1	American - 2
Valinda Bolton - 8	San Antonio City Council - 2	Nenad Kostic - 3	Chicon Street - 2	House Bill	Dulin's - 2
Senfronia Thompson - 8	Wilke-Rodriguez - 2	David Chu - 3	Fort - 2	970 - 1	Election Day - 2
Garnet Coleman - 8	Democratic House - 2	Kevin Russo - 3	San - 2	House Bill	Moncrease - 2
David Simpson - 8	HPD - 2	Steven Slowik - 3	Newtown - 2	294 - 1	A House - 1
Mark Homer - 7	CNN - 2	Doc " Anderson - 3	Dripping Springs - 2	HB 970 - 1	Hispanics - 1
Joe Deshotel - 7	Workers Defense Project - 2	Rick Noriega - 3	El Paso - 2	HB 296 - 1	Democrats
Abel Herrero - 6	Mando - 2	Thomas Bavedas - 3	Vail Pass - 1	SB 376 - 1	Dawnna Dukes -
Helen Giddings - 6	University of Connecticut - 2	Joseph Guerra - 3	Beaver Creek - 1	House Bill	1
Ruth Jones McClendon - 6	TCEQ - 2	Robert Dulin - 3	Austin state	3810 - 1	Mexican
Rene Oliveira - 6	Latino - 2	Rick Perry - 3	Representatives - 1	HB 2 - 1	American - 1
Pete Gallego - 6	Talons Challenge - 1	George Rodriguez - 2	Austin-area state	House Bill	State-level - 1
Scott Hochberg - 6	Toyota - 1	Marilyn Jackson - 2	Representatives - 1	1053 - 1	Libertarian
Rvan Guillen - 6	Texas House Farm-to-Table Caucus -	Laura Stromberg - 2	Chvez - 1	Senate Rill	Arthur _ 1

Automated politician analysis via named entity recognition

ABOUT THE PROJECT | ABOUT US | SHOW STATS | ARTICLE URLS

http://www.whoyouelect.com/texas/

APPLY NEW SOURCE FILTER

Showing nodes with more than 20 associations and hiding full details.

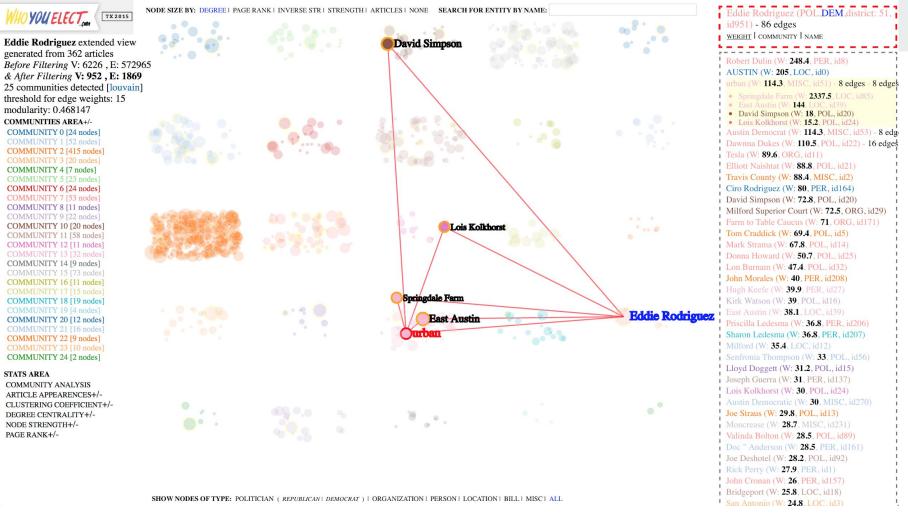
Show More Nodes Show Less Nodes

DALLAS MORNING NEWS (22)

HOUSTON CHRONICLE (136) ✓ NEW YORK TIMES (4)

TEXAS OBSERVER (6)

TEXAS TRIBUNE (60)



Extended Politician Networks derived from online news

http://www.whoyouelect.com/texas/





Other tools and conferences

Advanced visualization with Python tools

web-based Python tools supported by <u>Anaconda</u>, including: <u>Bokeh</u> (browser based viz tool) <u>HoloViews</u> (wrapper to Bokeh for simplicity) and <u>Datashader</u> (emphasis on big data) HoloViews+Bokeh tutorial from JupyterCon <u>link</u>

R Shiny apps

Link: Similar to Bokeh in that it renders to web browsers.

None of the above use native Web formats (pros / cons)

Conferences / People:

- IEEE VIS conf 2020 link
- Open Vis 2018 link
- Visualized videos link
- D3 expert: <u>https://sxywu.com/</u>





A Dashboard for Conference Tweets



An App to Visualize and Share My Dogs' Medical History



Living in the Lego World

A lyrical analysis of '69 Love Songs' by Magnetic Fields D3 is not for quick EDA! For EDA, use summary stats, matplotlib, PCA /T-SNE, etc.

D3 is for web facing, interactivity and complete customization. Learning curve.

Bokeh gets you 80% of what you need right out of the box, But the remaining 20% is painful, if doable.

R-shiny apps are similar to Bokeh with a little more functionality and community though its in the R eco-system and is tricky to host.

Datashader is better for "big data" (millions of points at once)

The trick with visualizing big data is aggregation and only loading what you need when you need it, and pre-caching expensive loads (websockets/queues for D3)