# Data Mining, Visualizing, and Analyzing Faculty Thematic Relationships for Research Support and Collection Analysis

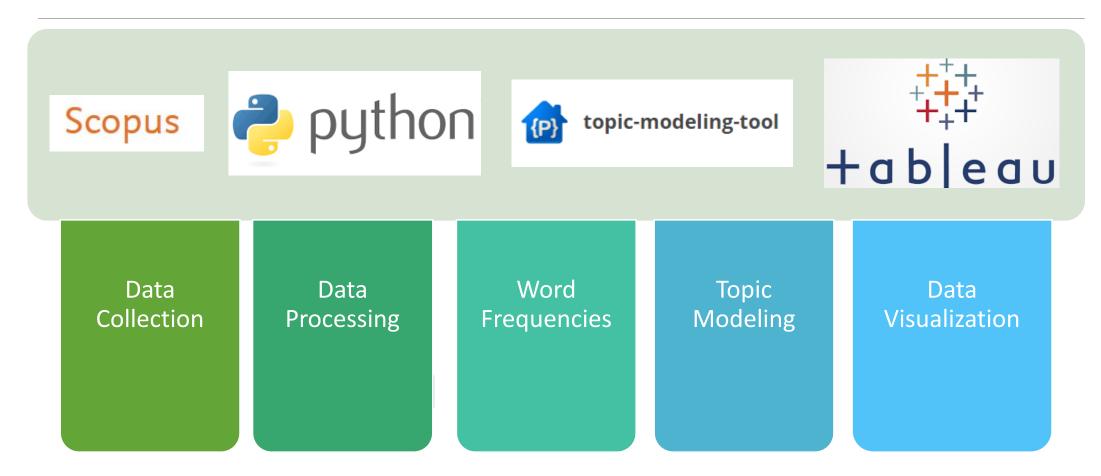
ASSOCIATION OF COLLEGE & RESEARCH LIBRARIES CONFERENCE 2017

Wenli Gao, Communication, Sociology, Anthropology Librarian, University of Houston Loretta Wallace, Business Librarian, University of Texas at Austin



Why are we doing this?

#### Process



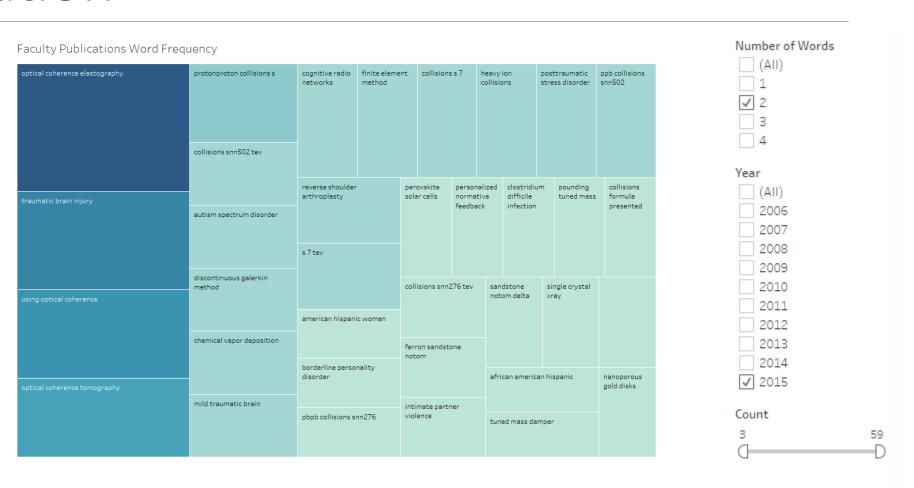
### Results

- 306title.csv
- 3 06title.csv\_1words.csv
- 5 06title.csv\_2words.csv
- 6 06title.csv\_3words.csv
- 3 06title.csv\_4words.csv
- 3 06topic.csv
- 3 07title.csv
- 3 07title.csv\_1words.csv
- 3 07title.csv\_2words.csv
- 3 07title.csv\_3words.csv
- 37 07title.csv\_4words.csv
- 07topic.csv
- 👪 08titles.csv
- 08titles.csv\_1words.csv
- 3 08titles.csv\_2words.csv
- 08titles.csv\_3words.csv
- 308titles.csv\_4words.csv
- 🚮 08topic.csv

phrase	count
('sum', 'frequency')	10
('frequency', 'generation')	10
('magnetic', 'recording')	8
('carbon', 'nanotubes')	8
('vibration', 'control')	7
('wireless', 'networks')	6
('english', 'language')	5
('shape', 'memory')	5
('scattering', 'series')	5
('drug', 'diffusion')	5
('neonatal', 'seizures')	5
('vitro', 'experimental')	4
('risk', 'factors')	4
('experimental', 'conditions')	4
('dy', 'ho')	4
('conditions', 'drug')	4
('memory', 'alloys')	4
('surface', 'plasmon')	4
('videotaped', 'neonatal')	4
('oxide', 'films')	4
('university', 'houston')	4
('carbon', 'nanofiber')	4
('diffusion', 'cornea')	4
('learners', 'risk')	4
('case', 'study')	4
('neural', 'networks')	4
('controller', 'design')	4
('finite', 'element')	4
('heat', 'conduction')	4
('sensor', 'networks')	4

Phrase	Count	Year	Number of Words
analysis	54	2006	1
model	37	2006	1
systems	36	2006	1
design	33	2006	1
effects	31	2006	1
control	31	2006	1
propertie:	30	2006	1
effect	29	2006	1
networks	28	2006	1
surface	26	2006	1
new	24	2006	1
magnetic	23	2006	1
films	22	2006	1
data	22	2006	1
synthesis	21	2006	1
modeling	21	2006	1
characteri	21	2006	1
approach	21	2006	1
structural	20	2006	1
performar	20	2006	1
seismic	19	2006	1
field	19	2006	1
applicatio	19	2006	1
water	18	2006	1
risk	18	2006	1
dynamics	18	2006	1
detection	18	2006	1
structures	17	2006	1

#### Visualization



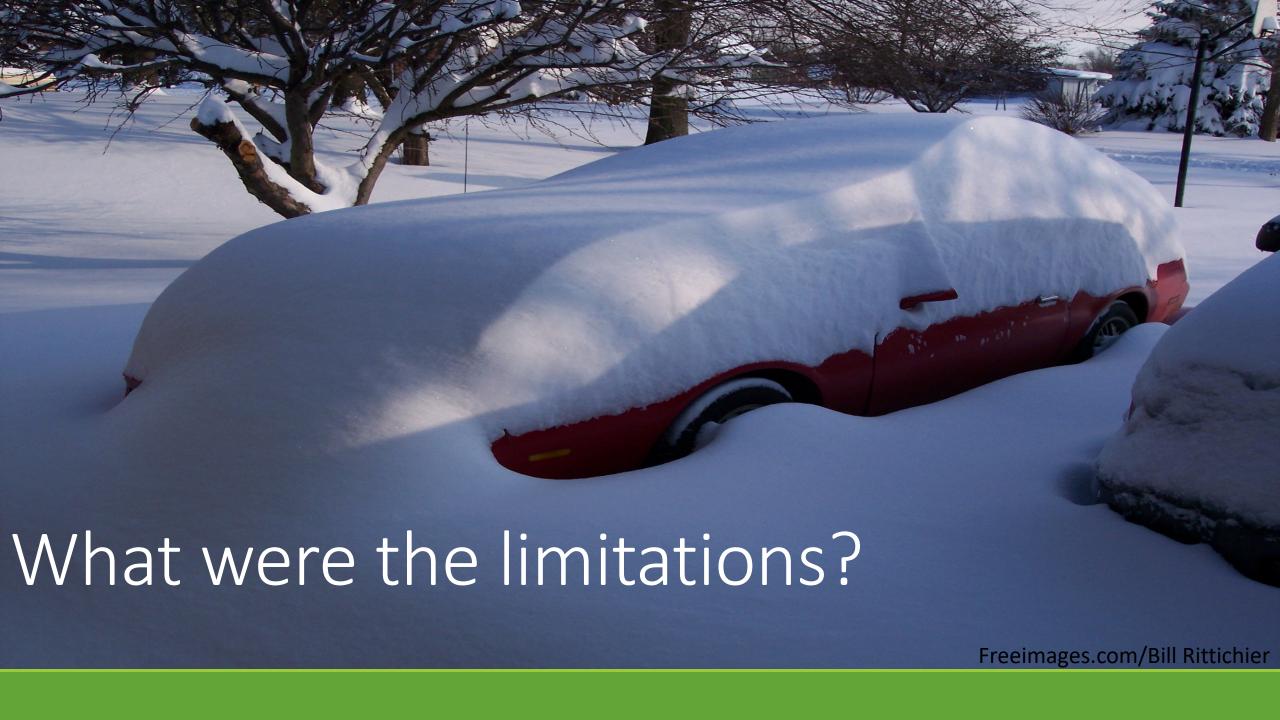
## Visualization

#### Faculty Publications Word Frequency by Department

traumatic brain injury	intimate partner violence	cancer survivors china		diffusion tensor imaging	diffusion tensor	diffu tenso	or	diversity ethical climate	divers ethica	l c	lrinking ollege tudents	drinking motives alcohol		
disord		channels conscious												
	major depressive disorder	nonconscious	effectiveness spanish		implicit drinking			frican merican	knee hip	hip latinos primary care		learners risk reading	life chinese	
		children reading difficulties	intervention		identity			adults					cancer	
			effects diversity ethical											
	mild traumatic brain	chinese cancer survivors			magno							artery	quality life	
			ethical clin perception		parvocellula channels	r						bypass grafting	chinese	
	spina bifida meningomyelocele	climate perceptions	ethical examining interactive		anxiety depressive symptoms midsagittal									
		turnover					attention conscious nonconscious		ous spa	atial		boys	support	
		college student drinking	examining											
			interactive		corpus callosum			k depression entoryii						
	randomized clinical trial	conscious nonconscious	externalizi	ing	anxiety sensitivity									
borderline personality disorder	line personality disorder	vision	behavior p		alcohol		recurrent abdominal pain		tot	total knee hip				
			grandparental major depressive		parental grandparental major		response educational interventions		tra	trade center disaster				
	spina bifida myelomeningocele			ressive					dis					
children spina bifida		coronary artery bypass	human midsagittal corpus		parvocellula channels conscious	r	severe traumatic brain			breast cancer survivors		world t	world trade center	

Number of Words  (AII)  1  2  3  4			
Year	Y	Q	*
✓ (AII) ✓ 2006 ✓ 2007 ✓ 2008 ✓ 2009 ✓ 2010 ✓ 2011 ✓ 2012 ✓ 2013 ✓ 2014 ✓ 2015			
Department  ☐ (AII) ☐ Chemistry ☐ Computer Scie ✓ Psychology	nc	e	







#### Questions

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