Hurricane Irma: Multiple avenues of study

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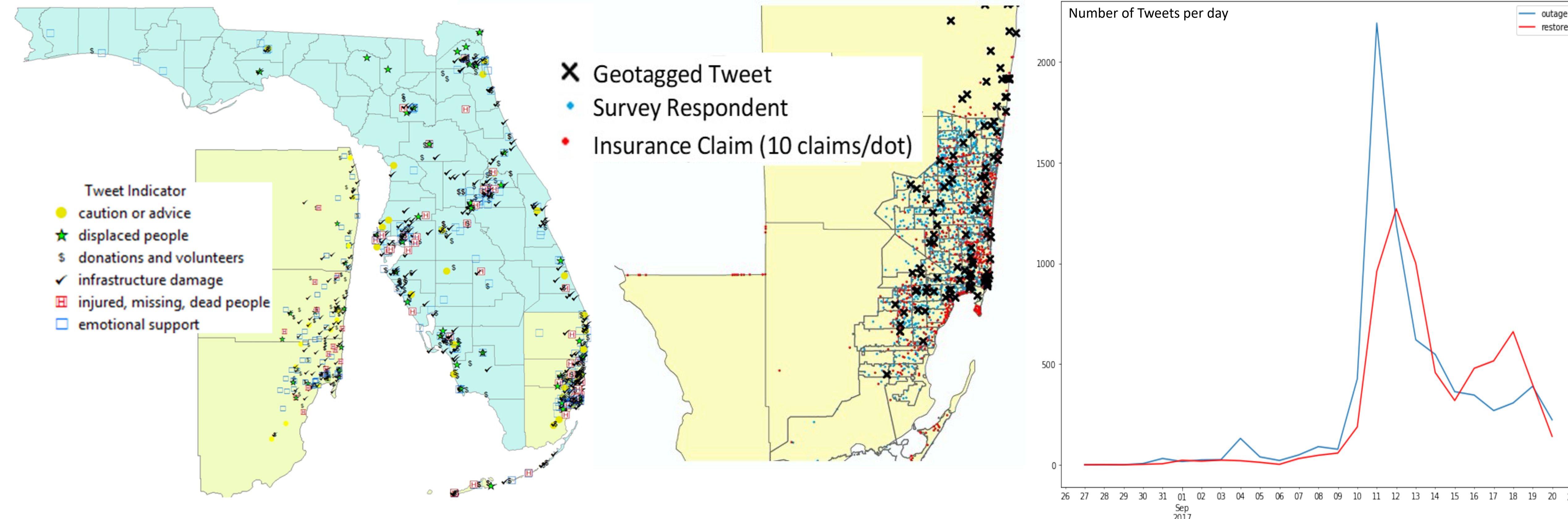
Specific Aims

- Construct time-series: Outage vs. Restoration of multiple infrastructures
- Determine restoration priorities

Data

- Irma: September 2017
- 29,519 NFIP Flood Claims
- Survey of 1,341 South Florida residents
- 902,861 English, original tweets.

Challenges

- Geo-locating tweets
- Tweets from public officials

- X Geotagged Tweet
- ◆ Survey Respondent
- ● Insurance Claim (10 claims/dot)

Tweet Indicator
- ● caution or advice
- ★ displaced people
- $ donations and volunteers
- ✓ infrastructure damage
- ⊞ injured, missing, dead people
- ☐ emotional support

Number of Tweets per day

	ODDS RATIO	P > |Z|
dayswork		
1	**8.068544**	0.004
2	6.497769	0.001
3	3.959006	0.001
4	2.301577	0.001
daysschool		
1	**3.498737**	0.009
2	3.154455	0.004
3	2.06831	0.011
4	1.608744	0.019
daysrespower		
1	**67.97108**	0.00
2	19.55811	0.00
3	7.822223	0.00
4	2.923175	0.00
daysstore		
1	**5.509051**	0.00
2	3.248145	0.00
3	2.579223	0.00
4	1.970057	0.00
daystransport		
1	**4.250643**	0.00
2	3.667053	0.00
3	2.70052	0.00
4	1.866914	0.00

Category	List of Terms
Power	['emergency power', 'emergency generator', 'black', 'blackout', 'dark', 'darker', 'power', 'electricity','backup']
Transportation	['metro', 'subway', 'train', 'transit', 'transport', 'bus', 'megabus', 'travel', 'road', 'route', 'taxi', 'cab', 'uber', 'lyft', 'road', 'roadway', 'street', 'bridge', 'drive', 'avenue', 'freeway', 'highway']
Outage	['down', 'out', 'prohibit', 'off', 'cancel', 'lost', 'close', 'shut', 'unopen', 'deficit', 'shortage', 'dearth', 'outag', 'delay', 'holdup', 'closure', 'suspend', 'back up']
Restore	['improv', 'back', 'return', 'restore', 'regain', 'open', 'reconstruct', 'repair', 'mend', 'fix', 'reopen']

The most important recovery priority is power, followed by reopening work, reopening grocery stores, repairing roads and transit, and reopening schools.

Residents are nearly 68 times more likely to choose a strategy that recovers electric power in 1 day than one that recovers electric power in 5 days.

Situation 1. Do you prefer a recovery that results in the scenario in column **A** or column **B**?

	A	B
your work place is closed for	4 days	5 days
your neighborhood's schools and daycare facilities are closed for	5 days	1 day
no electric power from electric utility at your residence for	5 days	4 days
your neighborhood grocery stores are closed for	3 days	5 days
roads and transit in your neighborhood are closed for	4 days	5 days