

# NRV Tweets

- Midterm Presentation
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# Virtual Town Square data

- Tweets
- Facebook Groups
- Websites
- RSS Feeds

# Events and tags

Data from Tweets/FB/RSS within the NRV

- Scanned for events
- Tweets/posts/messages are grouped together if they're related
- Tagged with keywords

# Categorizing Data

## Tagging

- Machine learning algorithms
- etcML
- Latent Dirichlet Allocation (LDA)

## Searching

- Solr

# Example Data Schema

topics	
id	INT(11)
title	VARCHAR(255)
description	TEXT
created_at	DATETIME
updated_at	DATETIME
user_id	INT(11)
keywords	VARCHAR(255)
day	DATETIME
Indexes	

topic_keywords	
id	INT(11)
name	VARCHAR(255)
distribution	DECIMAL(10,0)
created_at	DATETIME
updated_at	DATETIME
topic_id	INT(11)
Indexes	

stories	
id	INT(11)
title	VARCHAR(255)
description	TEXT
url	VARCHAR(255)
views	INT(11)
created_at	DATETIME
updated_at	DATETIME
user_id	INT(11)
topic_id	INT(11)
kind	INT(11)
Indexes	

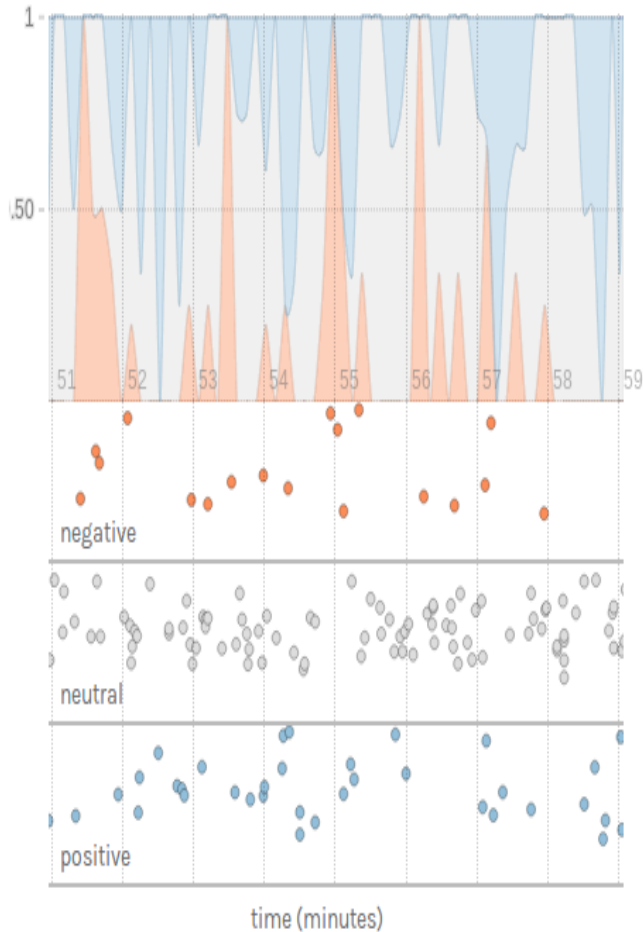
tags	
id	INT(11)
name	VARCHAR(255)
Indexes	

# Data Example

```
{  
  'id' : 4898,  
  'title' : 'University Distinguished  
Awards.....',  
  'description' : 'BLACKSBURG May 10....'  
  'views' : 76,  
  'updated_at' : '2014-02-09 10:10:53',  
  'topic_id' : 3729,  
  ...  
}
```

# Twitter query: "IHOP"

SEE MORE TRENDING!



## Top predictions: **negative**

- 96%** RT @antvilleda95: "@PaigeOlvera: So the wait for Ihop is 15 minutes, but chances are it will die down by the time we get there xD"ight than
- 94%** "@PaigeOlvera: So the wait for Ihop is 15 minutes, but chances are it will die down by the time we get there xD"ight than
- 92%** Working on free pancake day at IHop is the worst

## Top predictions: **positive**

- 97%** RT @TheRebusAgency: @HOUcheap @houstonsocial @IHOP Thanks for posting! We shared this on our FB page! Have a great week.
- 96%** @IHOP I love you and thank you for free pancakes once a year
- 95%** @IHOP HOORAY! Can't Wait :).

# Solr

- Powerful search engine platform
- Allows queries of large amount of Media data that we've collected.



# Query: Winter Storm

solr\_test1

**Id:** 438370322849345536

Tweet: Pix of my garden, after winter-storm "Pax" left his calling card.

url: <http://t.co/jgG4QP6hZG>

Hashtag: **Winter Storm**

Type: post

Date: 2014-02-25T17:50:04Z

**Id:** 438418813462523904

Tweet: #Augusta cleanup from **Winter Storm** Pax to cost more than \$8 million

url: <http://t.co/bd00ACN32P>

Hashtag: **Winter Storm**

Type: post

Date: 2014-02-25T17:50:04Z

**Id:** 438334465358561283

Tweet: Volunteering for **Winter Storm** PAX clean-up information is now available online including a downloadable volunteer sheet. More information...

Hashtag: **Winter Storm**

Type: post

Date: 2014-02-25T12:33:04Z

**Id:** 438328462177497088

Tweet: #NYC **Winter Storm** Pax Northeast, Middle Atlantic Forecast: Washington, Philadelphia ... - The Weather ... #NYCJobs

url: <http://t.co/allW5bvTBv>

Hashtag: **Winter Storm**

Type: post

Date: 2014-02-22T17:50:04Z

**Id:** 438290609074626560

Tweet: RT @heretohelp: We are monitoring **Winter Storm** #Pax Call 1-800-243-5860 24/7 if you need to file a claim. Tips from @RedCross <http://t.co/c...>

Hashtag: **Winter Storm**

# Data Aggregation

- Database tables
- Hadoop (HDFS)
- Virtual Town Square (VTS)
- Trend Timeline from Tweets

Today's

This Week's

All Stories

Collected From

All Sources

Blacksburg Daily Photo

Blacksburg Electronic Village

Blacksburg Mayor's Blog

Blue Ridge Muse

Christiansburg Virginia

Citizens First

Collegiate Times

Depotdazed

Downtown Blacksburg Blog

EastMont VA

League of Women Voters in Montgomery County

Montgomery County VA

NRV News

Ben Norris to travel around the world in pursuit of 2013 Special Olympics World Games gold medal



BLACKSBURG Va. Jan. 25 2013 – Just as students and instructors return to campus for the start of the...

Virginia Tech News · a year ago
382 Facebook Likes · 11 Tweets

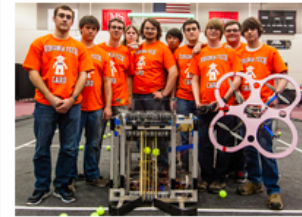
Virginia Tech earns high grades in The Princeton Review's latest college rankings

BLACKSBURG Va. Sept. 11 2012 – Virginia Tech is making the grade across a range of criteria – from academics to quality of life and in between – in The Princeton Review's 2012 college rankings lists....

Virginia Tech News · a year ago
0 Facebook Likes · 0 Tweets

0 2

Engineering students win aerial robotics competition



BLACKSBURG Va. May 1 2013 – A team of Virginia Tech College of Engineering students won first place ...

Virginia Tech News · 10 months ago
210 Facebook Likes · 1 Tweet

0 0

Virginia Tech's engineering business colleges ranked among best for undergraduates



BLACKSBURG Va. Sept. 12 2012 – Virginia Tech ranks 72nd among the nation's best universities in the...

Virginia Tech News · a year ago
0 Facebook Likes · 0 Tweets

Graduate profile: Study abroad scholarship winner will return to France after graduation



BLACKSBURG Va. May 10 2013 – Like many others at Virginia Tech Masters of Architecture degree studen...

Virginia Tech News · 10 months ago
156 Facebook Likes · 1 Tweet

Students help children in Honduras



BLACKSBURG Va. Feb. 27 2013 – For a group of 35 Virginia Tech students 2013 began with hot sun heavy...

Virginia Tech News · a year ago
114 Facebook Likes · 1 Tweet

0 0

# Current progress

- Data access progress
- Solr progress (news stories)
- Tweet tagging progress

# Future progress & Deliverables

- Integration with VTS
- News searchable
- Tweets tagged, searchable
- Facebook info tagged, searchable

# Possible uses

- Single source for local news
- Historical reference of events
- Tracking of event social impact
- Researching of trends
- Forecasting of event responses

# Timeline

- Feb 6 - Initial Meeting
- Feb 19 - Raw tweet data accessed, Solr tool reviewed
- March 5 - Initial research completed on associating news stories with topics
- March 19 - Initial research completed on associating Tweets with topics
- April 9 - Best topical modeling tool selected
- April 23 - Tweets and news stories associated with topics and searchable with Solr
- May 7 - Final report delivered