Twitter Information Operations
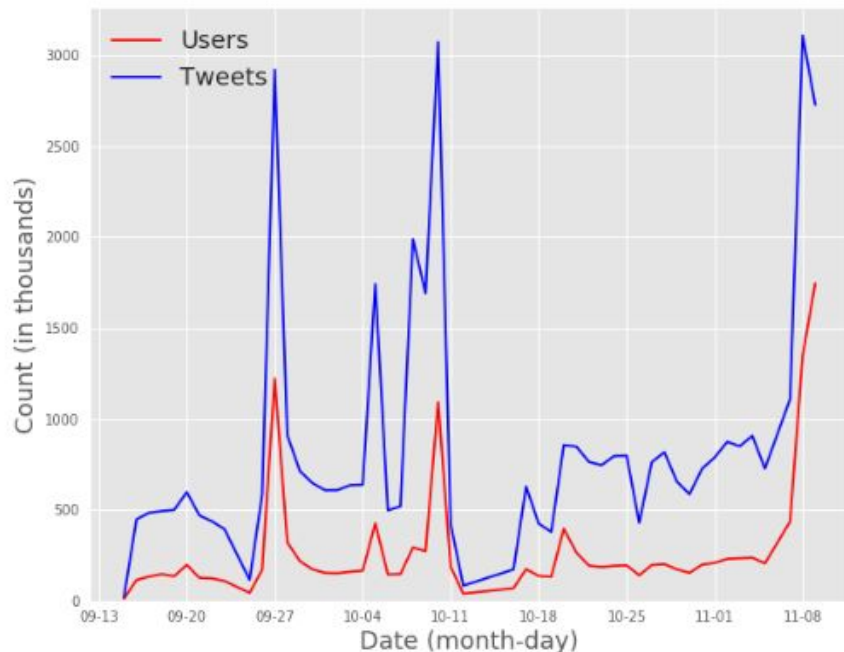
Liz
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Heather

Project Definition

❏ Twitter released a data set of tweets and accounts that were used to **influence foreign politics and public opinion**

❏ We would like to **compare the behaviors and techniques** of information operations between specific countries

❏ Countries Specified: **Russia, Venezuela, Bangladesh, Iran**

Who Cares?

- ❏ Governments
- ❏ Citizens
- ❏ Social Media Users

Current Research

Analyzing the Digital Traces of Political Manipulation:
The 2016 Russian Interference Twitter Campaign

Information operations is the use of information or **misinformation** to affect public opinion, typically to sow **discourse** or prevent rational debate.

Current research has focused on how information operations affect the United States, therefore **focusing on only English tweets**.

Current Research

Limitations:

- ❏ Limited scopes (only English and Russian posts in Medium Article)

- ❏ **Outdated data**
  - ❏ Our data set is new (Oct 2018)
  - ❏ Tons of new bots/misinformation posted daily

- ❏ Misclassification of bot accounts

- ❏ Bot accounts are deactivated

- ❏ Overlooked independent voters

Literature Survey

(part 1/2)

- ❏ Twitter Elections Integrity Datasets Readme

- ❏ *Don't @ Me* by Duo Labs

- ❏ Botometer

- ❏ #DEBATENIGHT: The Role and Influence of Socialbots on Twitter During the 1st 2016 U.S. Presidential Debate

- ❏ Twitter's list of Russian bots

Literature Survey

(part 2/2)

- ❏ Do Bots Impact Twitter Activity?

- ❏ A First Glimpse through the Data Window onto the Internet Research Agency's Twitter Operations

- ❏ Using Sentiment to Detect Bots on Twitter: Are Humans More Opinionated than Bots?

- ❏ Acting the Part: Examining Information Operations Within #BlackLivesMatter Discourse

Research Questions

- ❏ What topics are popular?

- ❏ How are other users reacting to tweets?

- ❏ What percentage of information operations are done by bots?

- ❏ How do the countries differ in target audience?

Our Approach
(Expected Innovation)

- ❑ Use recent data

- ❑ Expand our scope to Russia, Iran, Bangladesh, and Venezuela

- ❑ Include non-English posts

- ❑ **Expected Innovation:** Analyze how these countries affect each other, if at all

Challenges

- ❏ Scope of research
- ❏ Multiple languages
- ❏ Establishing a baseline, if one exists

Resources

Twitter Data Archive from Russia, Venezuela, Iran, Bangladesh

Twitter Elections Integrity Datasets

* *ira (3,613 users)*
* *iranian (770 users)*
* *bangladesh_201901_1 (15 users)*
* *iran_201901_1 (2,320 users)*
* *russia_201901_1 (416 users)*
* *venezuela_201901_1 (1,196 users)*
* *venezuela_201901_2 (764 users)*

Measuring Progress

(part 1/2)

For the midterm, answer these questions:

- Percentage and post frequency of bots across countries

- Which topics are popular and unpopular in different countries

- Do bots' tweets get retweeted by bots or real users?
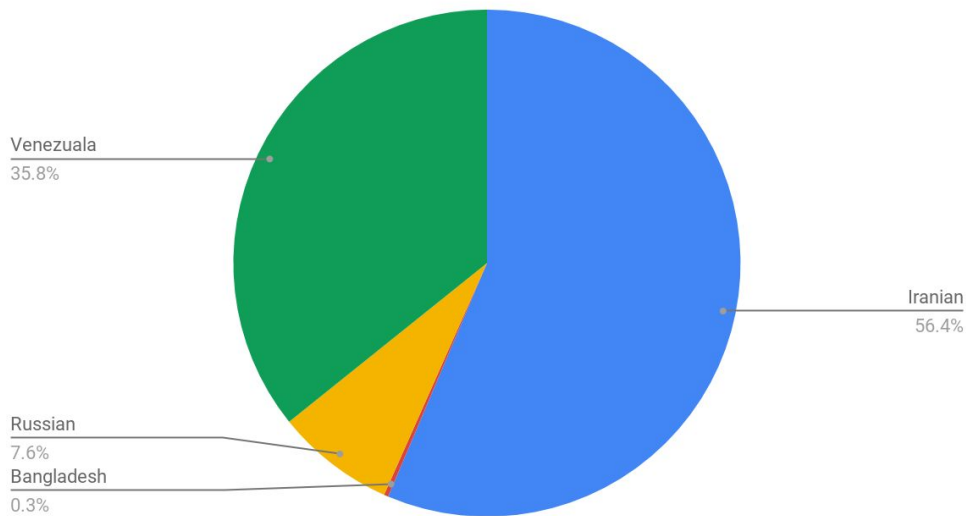
Measuring Progress

(part 2/2)

Final: From the analysis and observation from the midterm, we should be able to answer these questions:

- Is there a significant difference in the bot behavior across countries (languages, strategies, etc.)?

- Are they aiming at the same groups?

- Are they manipulating political issues in their regions or in foreign regions?

Risks

- ❏ Possibilities of misclassification of bot accounts
- ❏ Uneven distribution of of data
- ❏ Possible difficulty in understanding the sentiment of foreign languages

Account Archive Distribution

Venezuala
35.8%

Iranian
56.4%

Russian
7.6%

Bangladesh
0.3%

Payoffs

- ❏ Combat foreign interference
- ❏ Raise awareness
- ❏ Actual users' posts and opinions

Impact

"On Oct. 17, Twitter published more than **10 million** tweets by around **4,600** Russian and Iranian-linked propaganda accounts"(Haldevang, Max de, 2018)

"Automated accounts generate as many as **25 to 30 times** the number of messages as genuine political accounts"(Riechmann & Clare Jalonick, 2019)

Plan of Activities (Gantt Chart)

Task Name	Completed?	Feb 11	Feb 18	Feb 25	Mar 4	Mar 11	Mar 18	Mar 25	Apr 1	Apr 8	Apr 15	Apr 22	Apr 29	May 6
Pre-Proposal	Yes ▼	■												
First Presentation	In Progress ▼		■			S								
Project Proposal Report	In Progress ▼	■	■			P								
Practicum Milestone 1	No ▼		■	■	■	R								
Data Cleaning	No ▼			■	■	I	■							
Understand Bot Detection	No ▼			■	■	N	■							
Sentiment Analysis	No ▼				■	G	■	■						
Midterm Presentation	No ▼						■	■						
Topic Analysis	No ▼					B	■	■	■					
Target Analysis	No ▼					R		■	■	■				
Practicum Milestone 2	No ▼					E	■	■	■	■	■			
VTURCS Poster	No ▼					A						■		
Data Visualization	No ▼					K					■	■	■	
Final Project Presentation	No ▼											■	■	
Final Project Report	No ▼							■	■	■	■	■	■	■

| Milestone / Presentation / Report |
| Statistical Analysis |

KEY

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