



Turnstone

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State Department,
Bureau of Countering Violent Extremism (CVE)

Initial Problem

How might we identify, reach, and intervene in the lives of youth on the path to radicalization through online, community based means?



Week 14 Problem

How might we empower digital counter-messaging teams across the globe to challenge radical narratives?

70 interviews later



What does CVE look like? It's a spectrum.

Family
Prevention



Community
Intervention



Security
Action



Extremist Thought



Extremist Action

Got out of the building!

Went to conferences! (CORO)



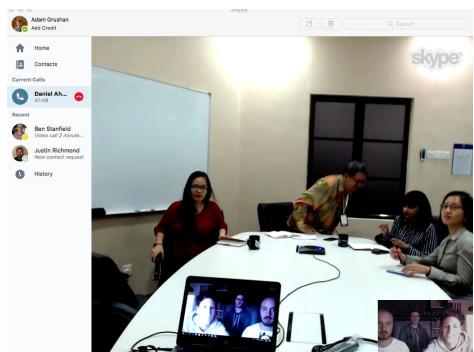
Wednesday night sprints



Met lots of academics (Dr. Southers!)



Went to talks! (Life After Hate)



Skyped! (SEARCCT)



And did plenty of interviews in the building...

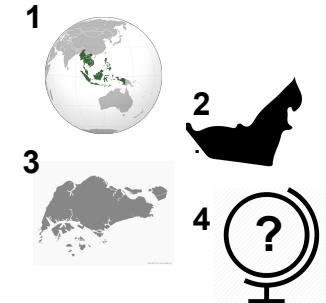
H4D Learning

Identify problems through interviews

Beneficiary Evolution: People and Locations



Beneficiary Evolution: People and Locations

Country	Week 1	Week 4	Week 5	Week 8	Week 10
					
CVE Space	White extremism & radical Islamist terrorism in the United States	White extremism in Germany	Politically motivated radical Islamist terrorism in the Philippines	Primary focus on Philippines, secondary on Malaysia	In Malaysia, Philippines, U.A.E, Singapore, and other countries

Beneficiary Evolution: People and Locations

Country

Beneficiary

CVE Space



		FY 2018 US Foreign Assistance CVE Funding - p.126 (in thousands)	CVE Funding per Capita (in thousands)	Internet Penetration	Access to Advanced Education Index as proxy measure of social services that exists	WJP Rule of Law Index as proxy measure for community's trust of law enforcement	Human Development Index	Terrorism Impact Score	Democracy Index	Total Score
1	Country - included if receiving Foreign Assistance CVE funding in FY 2018	Population	6,000	0.0009934964069	76.10%	46.83	0.47	0.763	5.638	4.86
2	Lebanon	6,039,277	3,000	0.00006113966662	58.10%	51.35	0.5	0.727	5.595	6.67
3	Colombia	49,067,981	10,862	0.0001046467391	55.50%	37.19	0.47	0.682	7.126	6.94
4	Philippines	103,796,832	19,000	0.0003920198945	89.40%	37.7	0.45	0.555	6.169	5.33
5	Kenya	48,466,928	3,000	0.0002609884852	50.90%	36.7	0.53	0.725	4.619	6.4
6	Tunisia	11,494,760	1,000	0.0001139349249	67.10%	54.87	0.5	0.776	0.043	6.57
7	Serbia	8,776,940	12,100	0.00004591853552	50.40%	37.19	0.52	0.689	4.55	6.97
8	Indonesia	263,510,146	3,000	0.001030422185	66.40%	32.16	0.51	0.764	1.487	5.91
9	Albania	2,911,428	3,100	0.0008173469498	69.30%	35.96	0.53	0.75	2.029	4.87
10	Bosnia and Herzegovina	3,792,759	1,010	0.0004848058952	72.20%	39.6	0.44	0.527	9.009	4.5
11	Macedonia	2,083,308	3,033	0.00001581038497	47.70%	20				
12	Nigeria	191,835,936	8,500	0.001724758914	61.20%	34.5				
13	West Bank and Gaza	4,928,225	8,500	0.0001231588973	44.50%	17.78	0.41	0.579	6.181	5.26
14	Bangladesh	164,827,718	20,300	0.0001200395516	45.60%	29.77	0.4	0.493	4.319	5.26
15	Uganda	41,652,938	5,000	0.0001200395516	22.70%	22.91	0.39	0.55	8.4	4.33
16	Pakistan	196,744,376	25,500	0.0001296098039	58.30%	27.27	0.51	0.647	0.077	4.77
17	Morocco	35,241,418	3,280	0.00009307230487	13.00%	18.13	0.47	0.531	3.413	5.76
18	Tanzania	56,877,529	2,125	0.00003736097607	11.70%	6.73	0.34	0.479	9.441	2.5
19	Afghanistan	34,169,169	14,298	0.0004184474021	11.80%	5.94				
20	Mali	18,689,966	1,960	0.0001048691046	20.50%	35.78				
21	Tajikistan	8,858,115	162	0.00001828831529	80.40%					
22	Kosovo	1,895,250	7,000	0.003693444137	30.60%	15.93				
23	Rwanda	12,159,586	8,000	0.0006579171363	16.60%	12.38				
24	Sudan	42,166,323	357	0.000008466472165	7.90%					
25	Somalia	11,391,962	7,250	0.0006364136397						



1

Beneficiary Evolution: People and Locations

H4D Learning
Pivot quickly and often.

Country



Beneficiary

Week 1

Community partners

White extremism & radical Islamist terrorism in the United States

Week 4

Threat assessment case managers

White extremism in Germany

Week 5

Threat assessment case managers

Politically motivated radical Islamist terrorism in the Philippines

Week 8

Digital counter narrative teams

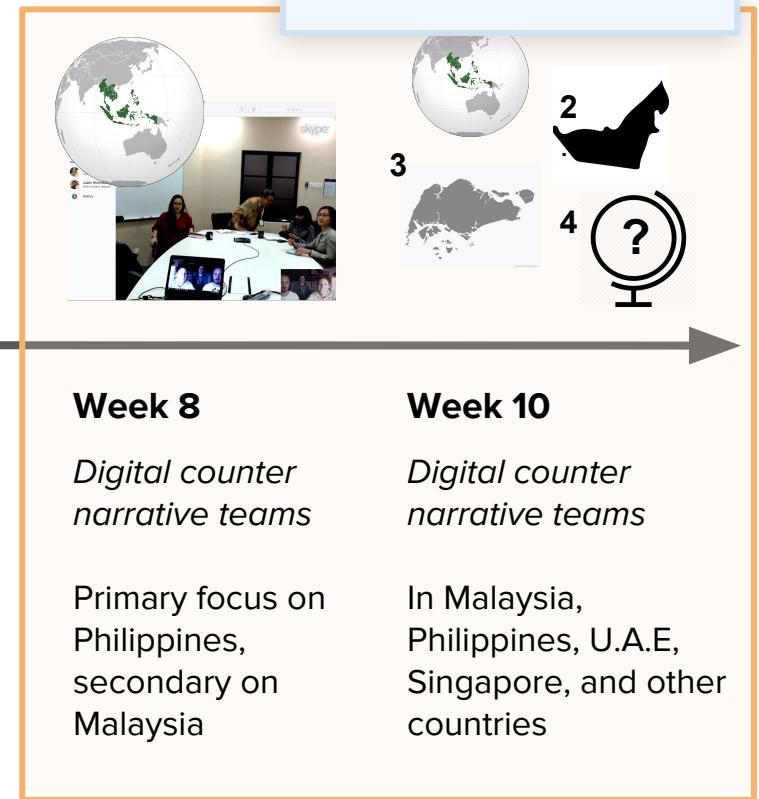
Primary focus on Philippines, secondary on Malaysia

Week 10

Digital counter narrative teams

In Malaysia, Philippines, U.A.E, Singapore, and other countries

CVE Space





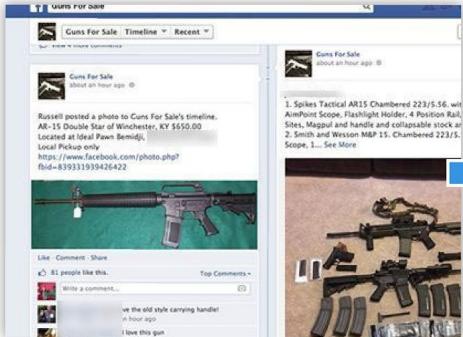
Social Media Analyst

Narrative Writer

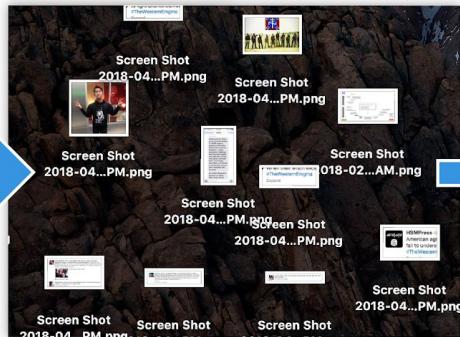
Content Producer

Marketer

1. IDENTIFY



2. COLLECT: SCREENSHOT



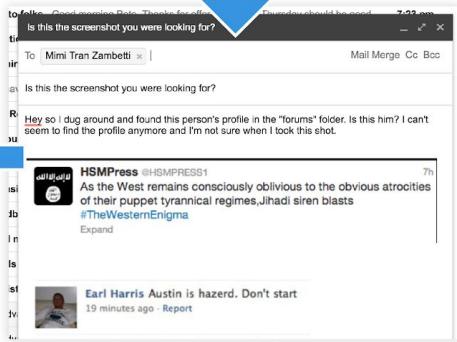
3. SORT: DROP INTO FOLDERS



5. ANALYSIS

Current Collection Method

4. RETRIEVAL: E-MAIL



1. IDENTIFY



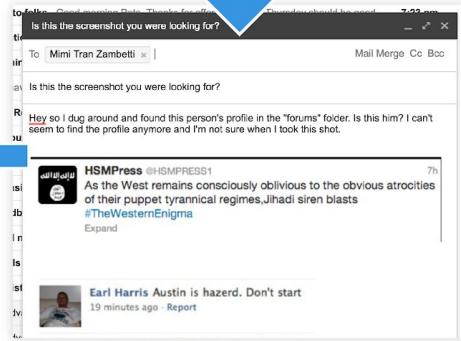
2. COLLECT: WEB SCRAPE



3. SORT: DROP INTO FOLDERS



5. ANALYSIS



4. RETRIEVAL: E-MAIL

Solution Phase 1

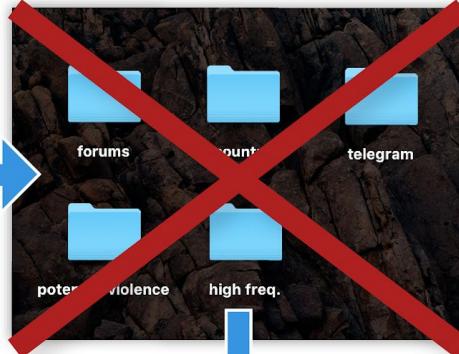
1. IDENTIFY



2. COLLECT: WEB SCRAPE



3. SORT: NLP AUTO-SORT



5. ANALYSIS

4. RETRIEVAL: SEARCHABLE DATABASE

Solution Phase 2



More Signal, Less Noise.

Keyword ▾

Search

Sort By

TIME

Last day

1 week

1 month

1 year

TYPE

Violent

Theology

Name

Sectarian

PLATFORM

Twitter

Telegram

Facebook

LOCATION

Pick a country ▾

Tweet in Somalia
4/19/16, 4am PST
Tags: violence, theology
Rate tag accuracy

HSMPress @HSMPRESS1 7h
As the West remains consciously oblivious to the obvious atrocities
of their puppet tyrannical regimes, Jihadi siren blasts
#TheWesternEnigma
Expand

Tagged violent

Tagged theology

HSMPress @HSMPRESS1 8h
When a Native American travels 1000s of miles to Somalia in order
to fight and kill the Americans, change is at hand
#TheWesternEnigma
Expand

What's next

Adam and **Brian** are graduating in May.

Handing off our learnings and proof of concept
to the State Department **Bureau of CVE**.

Turnstone would allow for analysts across
the globe to improve their approaches to
crafting counter narrative messages.



Turnstone



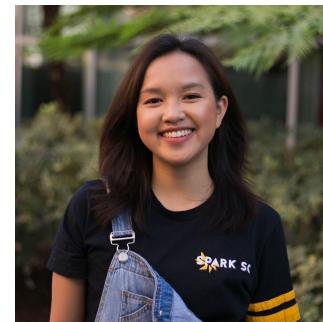
Brian Anglin
B.S. Viterbi
CECS



Adam Grushan
B.A. Economics,
Political Science



Ben Stanfield
B.S. Iovine &
Young



**Mimi Tran
Zambetti**
B.S. Iovine &
Young

With mentorship from
Peter Higgins, Managing Partner of Trust Decisions

KEY PARTNERS - State Department, Bureau of Countering Violent Extremism - Local religious leaders with ties to affected - In-cells educators in primary & upper education - School counselors - CVE Academic Researchers	KEY ACTIVITIES - Creation of guidelines/playbook	VALUE PROPOSITION - Ability to better prepare average people for fighting radicalization - Ability to identify situations where people are more susceptible to radicalization.	BUY-IN / SUPPORT - Allocation of resources for training - Self-motivated individuals need to review material	BENEFICIARIES - Youth (under 26) dissillusioned with the system, alienated from peers/ family, looking for purpose - CVE programs in cities such as Boston, Los Angeles, Minneapolis & pilot programs in other large cities across the US
KEY RESOURCES - Data on paths to radicalization. - Access to social media streams	DEPLOYMENT - Online access to policy and toolkit	MISSION ACHIEVEMENT - Use of our offered resources to stop a violent act from occurring that otherwise would have occurred		
MISSION BUDGET/COSTS - Deployment & publishing costs				

Week 1 - Preparing average people with best-practices for countering radicalization.

14 weeks later...

KEY PARTNERS - Traditional intervention practitioners like Creative Associates, WASL, USAID, CPE, etc. - CVE Teams at Facebook (Brian Fishman, Public Policy Manager), Twitter, Google, Apple - Local law enforcement and military - Existing social media tool providers (Track, Mention, Mooshot, Synthesis, Digitalstakeout, etc.)	KEY ACTIVITIES - Dev of web scraper that parses through Twitter data - Dev of NLP tools that provides helpful categorization features and backend database that stores that data - UI/UX design for front end access to backend database - Outsourcing sales to GEC	VALUE PROPOSITIONS (1) Automatically scrape the web for extremist messaging and use NLP to more effectively parse through message data, reducing noise, increasing signals, and thus allowing for reallocation of resources (2) Manage that messaging data in an easy to use, modular interface "Turnstone". (3) Identify common messaging themes that elicit strong emotional responses by measuring disengagement from ideology through in-person and online quantitative metrics. In turn amplifying effective messages. - Motivate individuals towards peaceful behavior. In turn reducing number of terrorist attacks in team countries, making those countries safer	BUY-IN / SUPPORT - Teams working on counter-narratives so SEARCCt administrators, GEC, Swaba Center, and CPCTR to integrate Turnstone into workflows - Internet services & open source data archives - Civil society orgs at large	BENEFICIARIES - Digital Strategic Communications Division at SEARCCt, Sawab Center in UAE, International Centre for Political Violence and Terrorism Research (ICPVTR) in Singapore (end users) - Malaysian Ministry of Foreign Affairs, UAE Ministry of Foreign Affairs, RSIS in Singapore (economic buyers) - Dr. Sharri Clark, Oliver Wilcox, Irfan Saeed at CT/CVE Bureau (recommenders)
KEY RESOURCES - Intellectual/technical product that provides strategy for dev team - Human resources to make up that dev team - Financial backing to make iterative dev future technical support feasible	DEPLOYMENT - Acquire access to social media, terrorist forum data & internal/public lists of users of interest - Develop trust and sharing of info between possible future key partners that lead productive collaborat	MISSION ACHIEVEMENT - Speed up current methods to quantitatively prevent further radicalization of youth exposed to influx of narratives, in turn freeing up time and resources for beneficiaries to move downstream and implement intervention programs		
MISSION BUDGET/COSTS - Software development, data retrieval, and sales costs - Time spent learning natural language processing techniques and designing new methodologies for measuring message effectiveness				

Week 14 - Automatically scrape the web for extremist messaging to more effectively parse message data and reduce noise.

Key Beneficiary Discovery

Dr. Erroll Southers



Adam Badawy and Emilio Ferrara



JD Maddox



Key Teams



S. RAJARATNAM
SCHOOL OF
INTERNATIONAL
STUDIES

Digital Marketing Platforms



Traackr



“Social listening” Tools



Digital CVE Organizations



Selected NLP Research

Rise of Jihadist Propaganda

The Rise of Jihadist Propaganda on Social Networks

Adam Badawy, Emilio Ferrara*

University of Southern California, Information Sciences Institute

*Corresponding author: emiliofe@usc.edu

Twitter analysis for categorical tagging

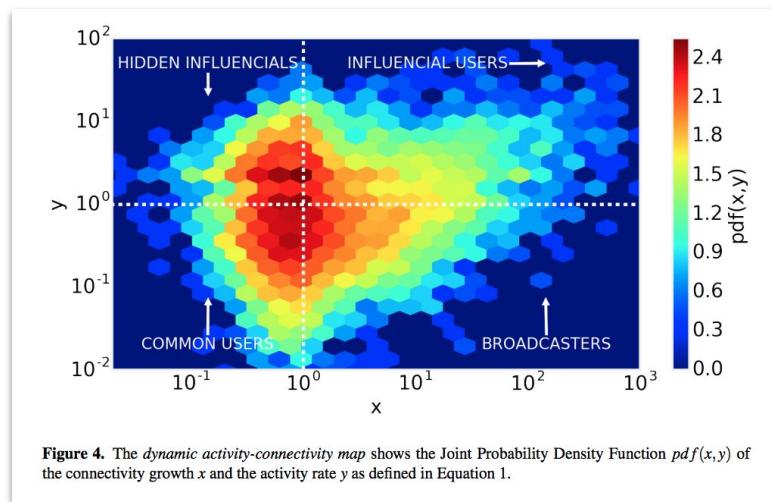


Figure 4. The dynamic activity-connectivity map shows the Joint Probability Density Function $pdf(x,y)$ of the connectivity growth x and the activity rate y as defined in Equation 1.

Twitter network analysis

NLP Applications and Techniques

Understanding

Macro

Applications

Categorization

Clustering

Techniques

Naive Bayes

SVM

Micro

Semantic Understanding

Entity Recognition

Actions

Top Down

Statistical Learning