Digital Threats to Democracy

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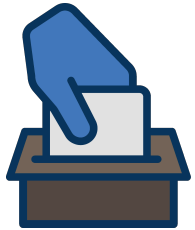
Digital Threats to Democracy

Social media's relationship to elections and democratic deepening in emerging democracies



Analysis and action research during elections in Africa, Asia, and Latin America

Increasing evidence suggests identity politics, misinformation, and hate speech is **dominant globally**

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Aggie & Case Study: Nigeria, Ghana, and Kenya

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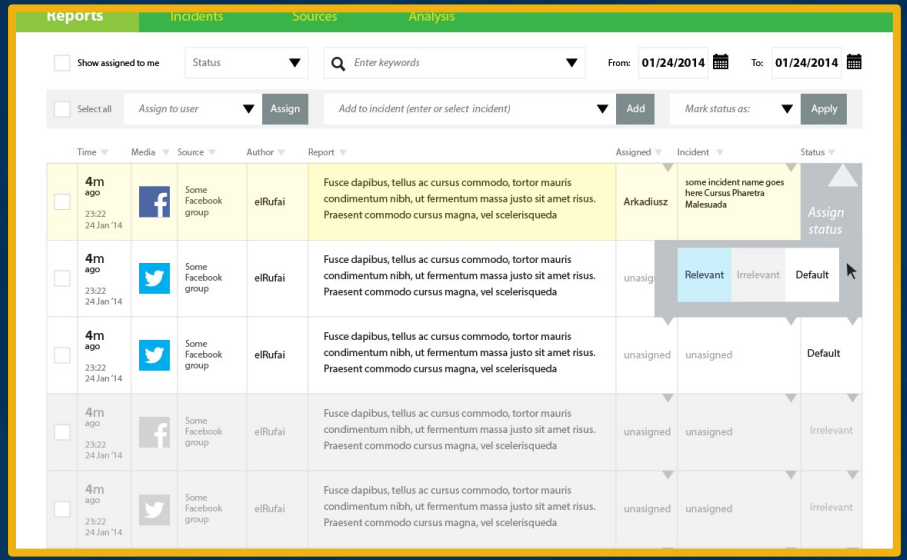
Human-in-the-loop semi-real-time tracking platform with direct facilities for escalation and response



Sources

Reports

Incidents

Aggie: Social Media Tracking Platform

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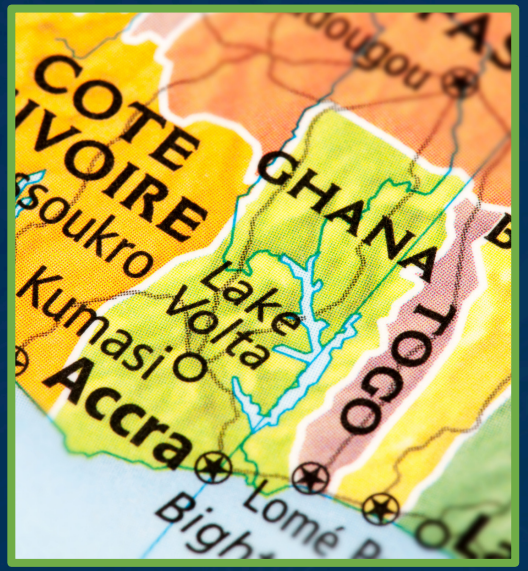
Nigeria

2011

Ghana



2012

Kenya

2013

Country Comparisons

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Country	Election Date	Data Acquisition Time Span	Twitter Reports
Nigeria	16 April 2011	15 April 7:00 AM – 19 April 7:00 AM	192,142
Ghana	7 Dec 2012	6 Dec 7:00 AM – 10 Dec 7:00 AM	320,789
Kenya	4 March 2013	3 March 7:00 AM – 7 March 7:00 AM	254,216
	Total		767,147

Twitter: Policy vs. Identity Politics

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Policy queries:
most mentioned bi-grams from the top two contending political party's electoral campaign manifestos

Identity queries:
terms associated with the relevant tribal or ethnic groups, religion, and geopolitical region specific

Twitter: Policy vs. Identity Politics

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Country	Projected Number of Tweets Relevant to Policy Terms	Policy Percentage of Dataset	Projected Number of Tweets Relevant to Identity Terms	Identity Percentage of Dataset
Nigeria	4,014	2.09%	8,323	4.33%
Ghana	41,466	12.93%	6,104	1.90%
Kenya	5,929	2.33%	4,372	1.72%

Twitter: Policy vs. Identity Politics

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"5 years on, how will we measure gov effectiveness? Improved economic integration with our neighbors... #choice2013 #kenyadecides"

2,822 tweets about economic growth in Kenya

4,327 tweets about identity in Kenya

"I'll never ever trust kikuyu hata... [redacted] you kikuyuz [redacted] you"

Example Tweets from Kenya

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Virtual space of Twitter is a **reflection of and an actor** in the democratic process

Increasing evidence that **identity and false information** flows with **little friction**

In 2011-2012, **Nigeria** had **2 identity tweets** for every **1 policy tweet**; **Ghana** had **7 policy tweets** for every **1 identity tweet**.

Where are We Headed?

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ML / NLP & Case Study: Myanmar

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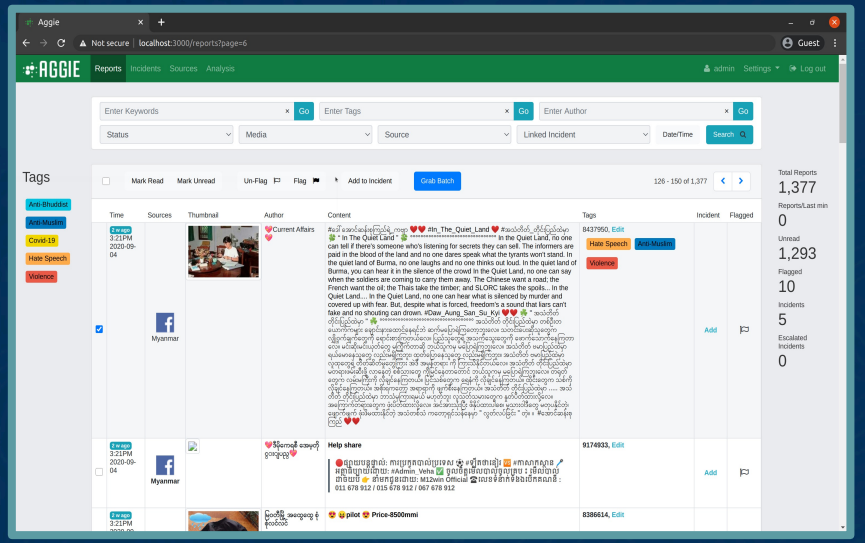
Challenges in Emerging & At-Risk Democracies:

- Limited text tools and data
- Diverse language and culture
- Range of preferred platforms

ML with small data & under-resourced languages

Machine Learning / Natural Language Processing for Hate, Disinformation, and Electoral Irregularities



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Case Study: Myanmar Election November 2020

- Collaborated with **civil society partners**, **The Carter Center** and **New Myanmar Foundation**
- Deployed **distributed social media tracking** and response center
- **Military coup** in February 2021

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Experienced **significant harm from** hate speech and disinformation over **social media**

Ethnic, linguistic, and religious **minorities** have been **persecuted**, including **genocide**

Social Media in Myanmar

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Model	Precision		Recall	
	Hate	Not Hate	Hate	Not Hate
Balanced Random Forest	0.08	0.99	0.82	0.58
Balanced Random Forest (Oversampled minority class)	0.84	0.97	0.98	0.82
FastText Multilingual Embeddings	0.71	0.97	0.27	1.00

Daniel Nkemelu and Harshil Shah

Hate Speech Classifier: Most Recent Results

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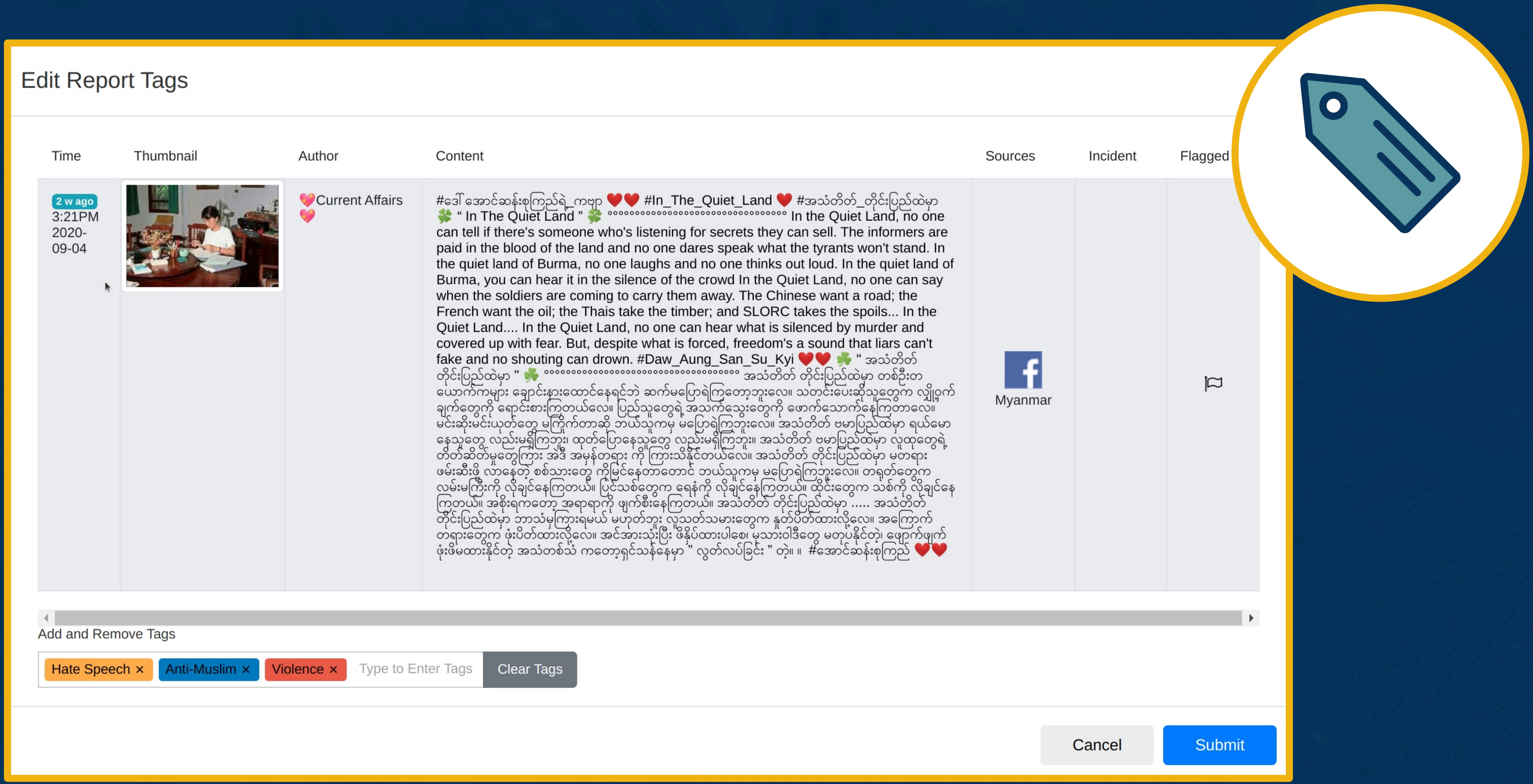

Trackers Tag Hate Speech, Disinformation, & Irregularities

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“Low-resourced” languages, limited training datasets, limited text tools, limited language models

Working across languages

Coordination and **communication challenges**