

Portfolio

Dr. James Allen-Robertson

Digital Research | Communication | Data Science

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Community Mapper

Project

Community Mapper

The Project

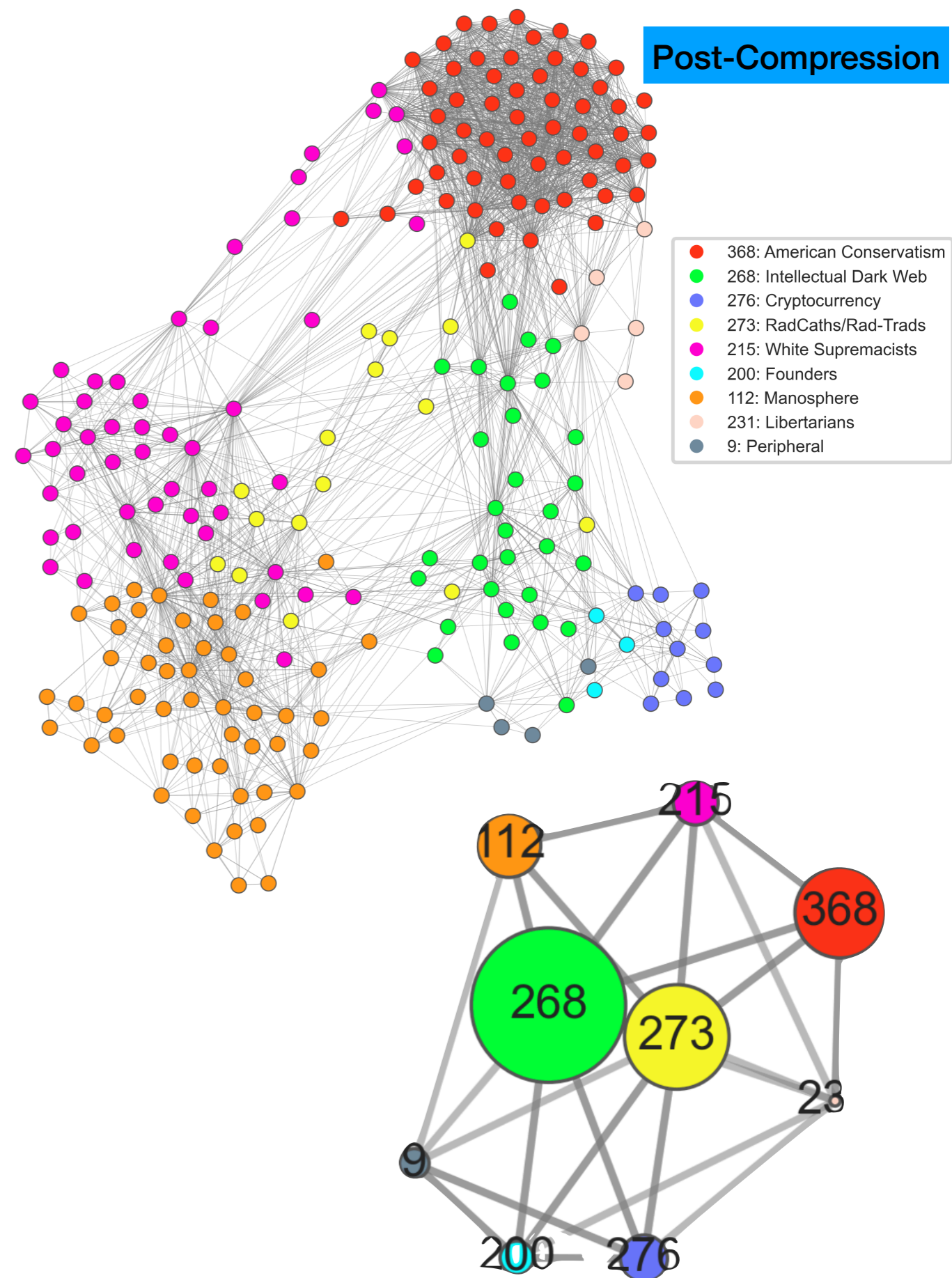
This project explores how fringe far-right “tech right” politics bleed into more mainstream online spaces. I built custom data pipelines to crawl the Twitter network outward from a core set of reactionary accounts, ending up with a mapped follower graph of 4.2 million users and 10.7 million follower links.

Using Python and the Memgraph graph database, I implemented a network-compression method to shrink the raw network into a smaller, version that maintained the underlying structure. This compressed view made it possible to identify key communities, map how they connect, and layer on interaction data (retweets, mentions and other activity) to see how they boost each other’s messages in practice.

The results highlighted two crucial “bridging” communities—radical Catholic traditionalists and heterodox intellectuals often linked to the “Intellectual Dark Web”—that help knit together tech startup circles, cryptocurrency enthusiasts, white supremacists and mainstream American conservatism.

A paper detailing the work is currently under review at UC Berkley.

Text Mining | Graph Databases | Social Network Analysis



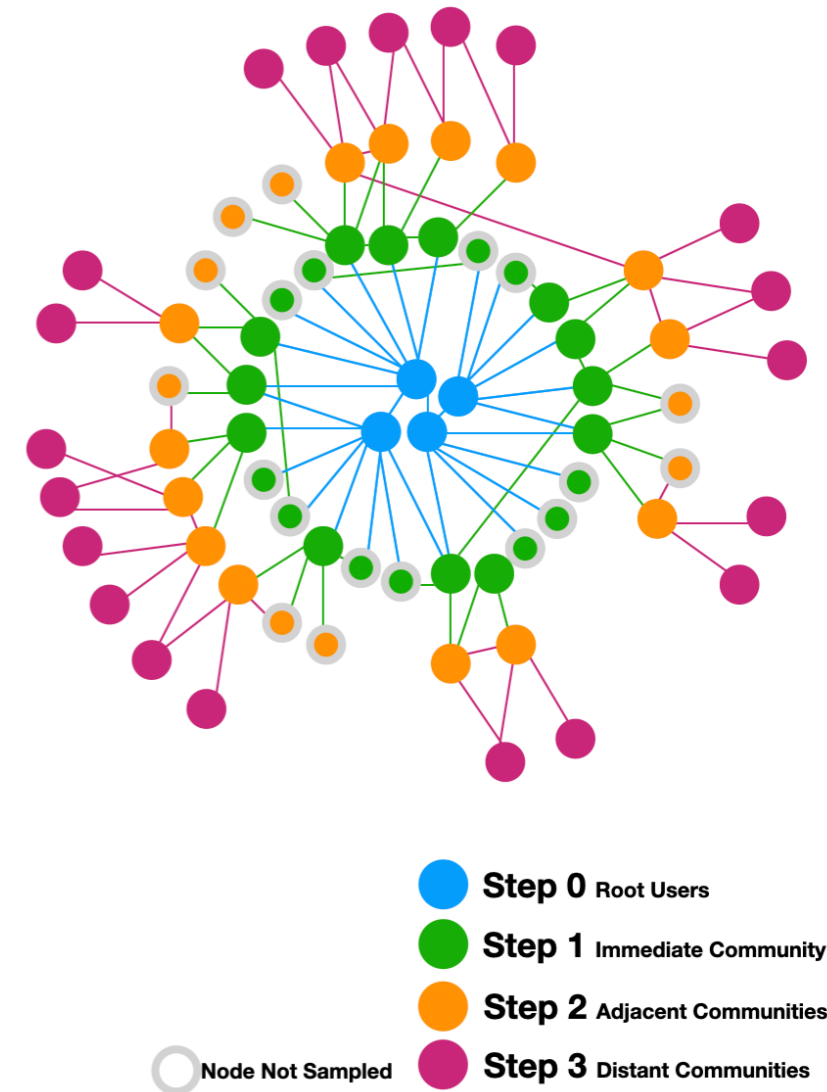
Inter-Community Betweenness Centrality

Community Mapper

Communicating the compression process

Step	N Users Added	Stage
0	10	Root
1	110,962	Immediate Ego-Network
2	942,144	Adjacent Communities
3	3,235,149	Distant Communities
Total	4,288,265	

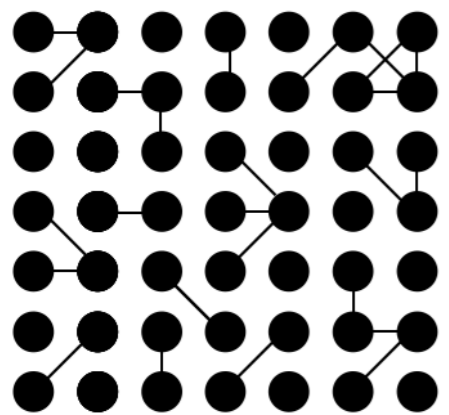
Interconnected by 10,779,775 follower relations



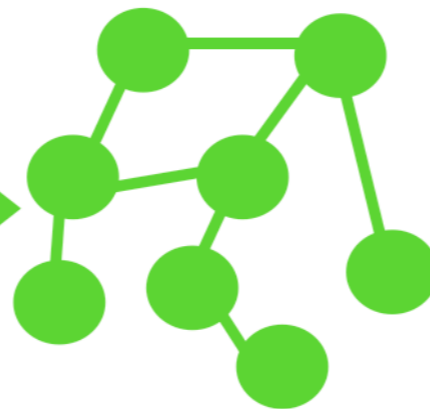
User Level

Core Level

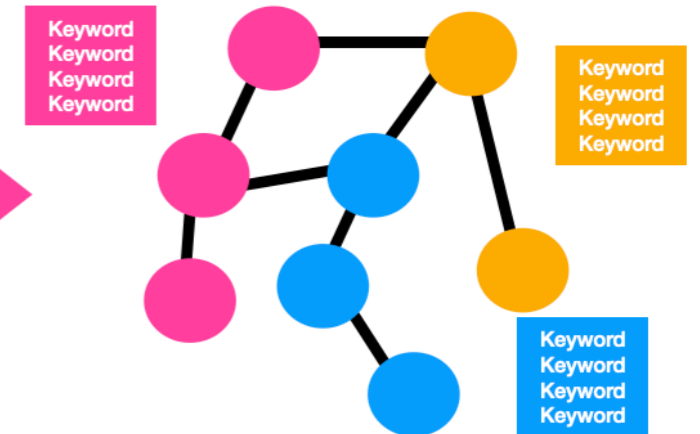
Community Level



Network Compression



Community Detection



~ Millions of Users

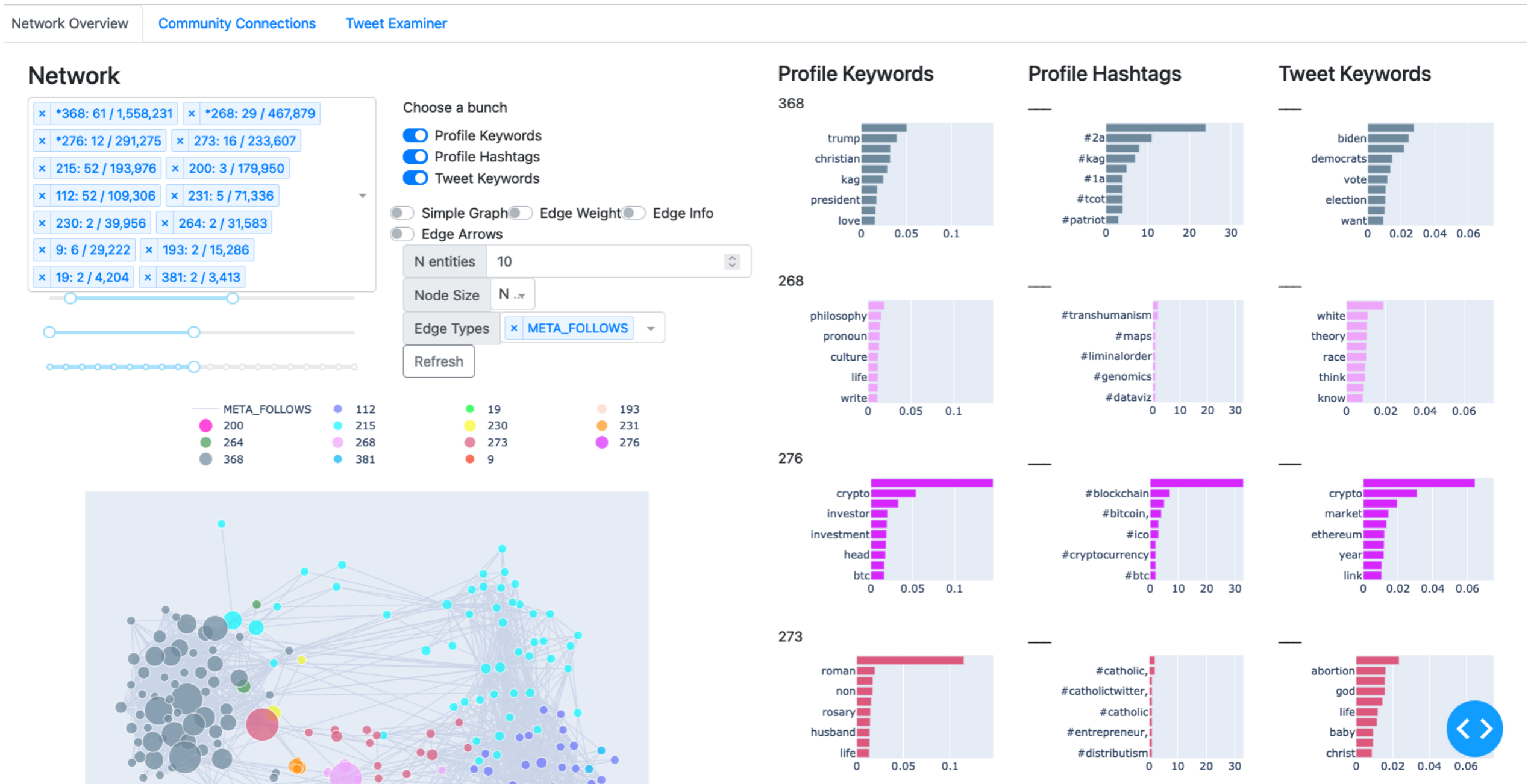
~ Hundreds of Representative 'Core' Users

~ Tens of Communities

Follower Graph

Community Mapper

Human interpretable analysis



An interactive dashboard created in Plotly to aid qualitative collaborators

Community Mapper

Package Development

Squashy: Graph Compression package

```
In _ 1  from squashy import KCoreIdentifier, GraphAgglomerator
2  from mini_memgraph import Memgraph
3
4
5  # Database with network data
6  database = Memgraph()
7
8  # Identify Core nodes within a (USER)-[FOLLOWS]->(USER) network
9  core_identifier = KCoreIdentifier(database, 'USER', 'FOLLOWS', core_label='CORE')
10 core_identifier.identify_core_nodes()
11
12 # Determine representatives such that (CORE)-[REPRESENTS]->(USER)
13 agglomerator = GraphAgglomerator(database, 'USER', 'FOLLOWS', core_label='CORE', weight='weight')
14 agglomerator.set_hop_range(min_hops=1, max_hops=3)
15 agglomerator.agglomerate()
16
17 squashed_graph = agglomerator.get_core_graph()
```

Public facing version still in early development



github.com/Minyall/squashy

YouTube Theme Scanner

Project

YouTube Theme Scanner

The Project

The role of AI videos in disinformation and propaganda is growing rapidly.

This project investigates a sudden wave of AI-generated “story” videos on YouTube that dramatise the lives of political figures and celebrities, with a focus on personalities close to the Trump administration and the American right. These short narratives typically cast their central figure as calm, rational and compassionate, set against an emotional or unreasonable opponent, creating highly flattering and shareable political myths.

The analysis covers 931 videos across 192 channels that all use identical disclaimer text, pointing to a coordinated or template-driven production pipeline. Using large language models for context-aware entity recognition alongside word-embedding-based topic modelling, the project maps recurring storylines, emotional framing and ideological themes across this emerging genre of synthetic political media.

0_Liberal_Response_Live_Host

Type: #topic



Topic Stats:

topic_label	n_videos	total_views	median_views	total_likes
0_Liberal_Response_Live_Host	108	3.60293e+06	923.5	74632

Top Terms

Liberal, Response, Live, Host, Trump, Mocks, Destroys, Speechless, Tv, Stuns

Proportion Table

people	n_videos	topic %	person %	Ranking
Barron Trump	62	50.8197	29.9517	1
Melania Trump	33	27.0492	41.7722	2
Elon Musk	18	14.7541	12.9496	3
Sylvester Stallone	7	5.7377	70	4

Summary >

Text Mining | Human-in-the Loop
Analysis | Web Scraping

An interactive topic summary page

YouTube Theme Scanner

The Project

- Each entity in the project including videos, channels and named public figures has a highly linked page in the project output.
- Auto generated topic summaries allow swift parsing of topics for human interpreters.

Summary

The main overall theme is "Celebrity/Public Figure Triumphs Over Perceived Liberal/Media Adversity."

This theme focuses on portraying moments where celebrities, public figures, or those associated with them (like Barron Trump) are depicted as skillfully and often humorously defending themselves or their values against what are presented as unfair attacks, biased questions, or disrespectful behavior from liberal media personalities or figures aligned with liberal ideologies. The titles emphasize a sense of victory and shock, highlighting the figure's ability to "destroy," "shut down," or leave their opponents "speechless." There's also an element of "us vs. them," suggesting that the audience is meant to identify with the celebrity/public figure and celebrate their supposed victory over the perceived liberal elite.

Here are some examples:

- "Melania Trump Hilariously DESTROYS Liberal TV Host on LIVE, Her Response Left Everyone Speechless"
- "Elon Musk DESTROYS CNN Reporter After Being Asked This RIDICULOUS Question!"
- "Barron Trump STUNS the Nation With His FIRST-EVER Speech – Standing Ovation & Viral Moment!"
- "Clint Eastwood's 2024 Oscar Speech Goes Viral || Hollywood Has Lost Its Soul"
- "Jackie Chan Shutting Down Disrespectful Interviewer"

Generated by Gemini - Temperature: 1.0

A topic summary

A Little Girl Asks Trump About God His Response Brings Her To Tears_zMbfmMip2Mk

Properties

created_date	2025-02-06 16:07:45+00:00
title	A Little Girl Asks Trump About God – His Response Brings Her To Tears!
data_idx	0
aliases	0 ×
+ Add property	

About

Type: #video

Title: "A Little Girl Asks Trump About God – His Response Brings Her To Tears!"

Channel: [Unscripted Stories](#)

Topic: [6 God Little Brings Girl](#)

People: [Donald Trump](#)



Notes

An interactive video page

Public Engagement

Collaboration | Impact | Outcomes

Public Engagement

Anti-Radicalisation Work

Who is the most successful at spreading hate, and why?

A collaborative project with HOPE not hate that develops a scalable method to pinpoint the most influential spreaders of far-right hate and extremist narratives on Telegram.

Using over 3 million messages from 12 public chats, combined with deep-learning text classification and behavioural scoring, the study shows how exposure to specific hate topics significantly increases the likelihood that users later express the same ideas.

The work identifies two key radicaliser roles: “influencers”, who weave multiple racist and conspiracist narratives into compelling narrative frames, and “reinforcers”, often high-volume organisers or admins who normalise and entrench extremist worldviews over time.

The resulting framework provides practical, actionable insights for platforms and monitoring organisations seeking to understand extremist ecosystems, prioritise action against high-risk actors and design targeted interventions against online radicalisation and violent extremism.

Complex Data | Machine Learning | Method Innovation



[Read the report](#)

Publishing

Writing | Storytelling | Research

Publishing

Books

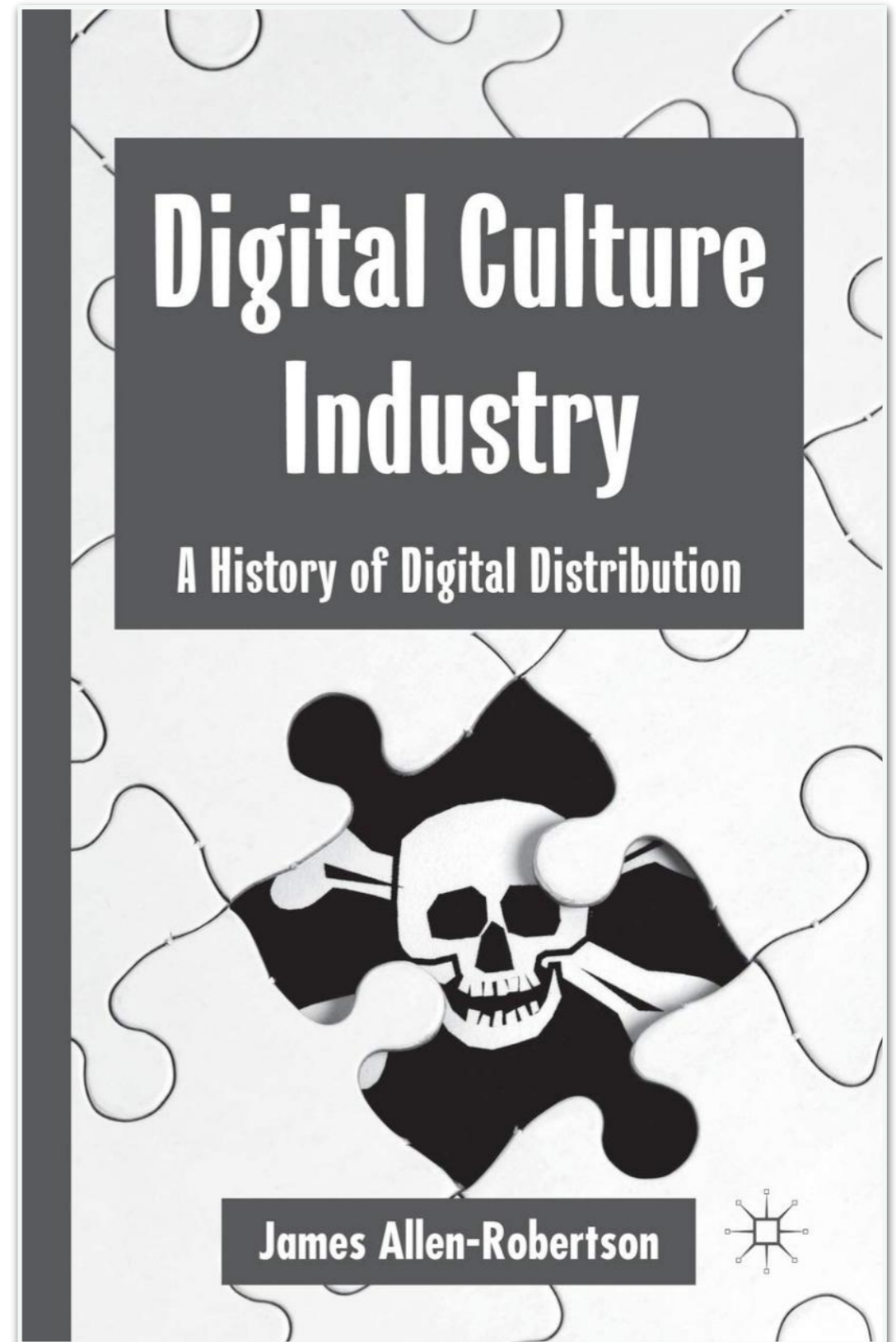
My book, *Digital Culture Industry* (2013, Palgrave Macmillan) is a public facing story driven piece focusing on the key actors and decisions of the hidden infrastructures, **piracy networks and hacker cultures behind platforms like Napster, MP3.com, The Pirate Bay and BitTorrent.**

By examining individual stories the book shows how the unintended consequences of technical design, legal wording and personal choices intersect to have monumental social repercussions.

The books show how code, protocol design and rights management transformed our relationship to media ownership and access, laying the groundwork for our contemporary age of media streaming.

I am also being contracted to write a second book on the **ideological history of tech culture and the far-right** by Bristol University Press, to be published in 2027.

Research | Storytelling | Science & Technology Studies (STS)



Publishing

Academic Journals

My academic work has focussed primarily on the intersection of technology, culture, politics and power. How each of these things interacts with the other. The kinds of topics I have published on include:

- How ideas move through the internet and take form.
- How encryption technology formed the basis of alliance between tech companies and activists.
- How software design shapes our understanding of media content.
- How activists used visual media to reframe and manage their offline campaigns and the blurring of online and offline activism.
- How social media facilitated polarisation in anti-vaccination debates.
- The possibilities of using unconventional data sources to identify patterns in human rights violations in business.

Methodologically I push the boundaries of social science research, developing innovative new methods through data science techniques to address specific questions and research needs, whilst always aiming to elevate and prioritise human interpretation at each step.

I have published in:

- *Big Data & Society* (Sage)
- *Information, Communication & Society* (Taylor & Francis)
- *New Media & Society* (Sage)
- *Crime, Media, Culture* (Sage)
- *Business & Human Rights Journal* (Cambridge University Press)
- *Mobilities* (Taylor & Francis)

Teaching

Mentoring | Innovation | Communication

Teaching

Data Science

I have significant experience designing and delivering courses in programming and data science methods, designed specifically for people with no prior experience.

I have successfully trained years of student cohorts in Python programming and data science techniques, beginning with fundamental skills of exploratory data analysis and visualisation, moving on to more complex text mining and network analysis techniques alongside web scraping and API based data collection

I design my courses to be highly structured with substantial support, but also fun, injecting personality into the process through funny examples, unusual datasets, and question oriented tasks designed to get students to think in terms of questions with methods as the toolkit by which to answer them.



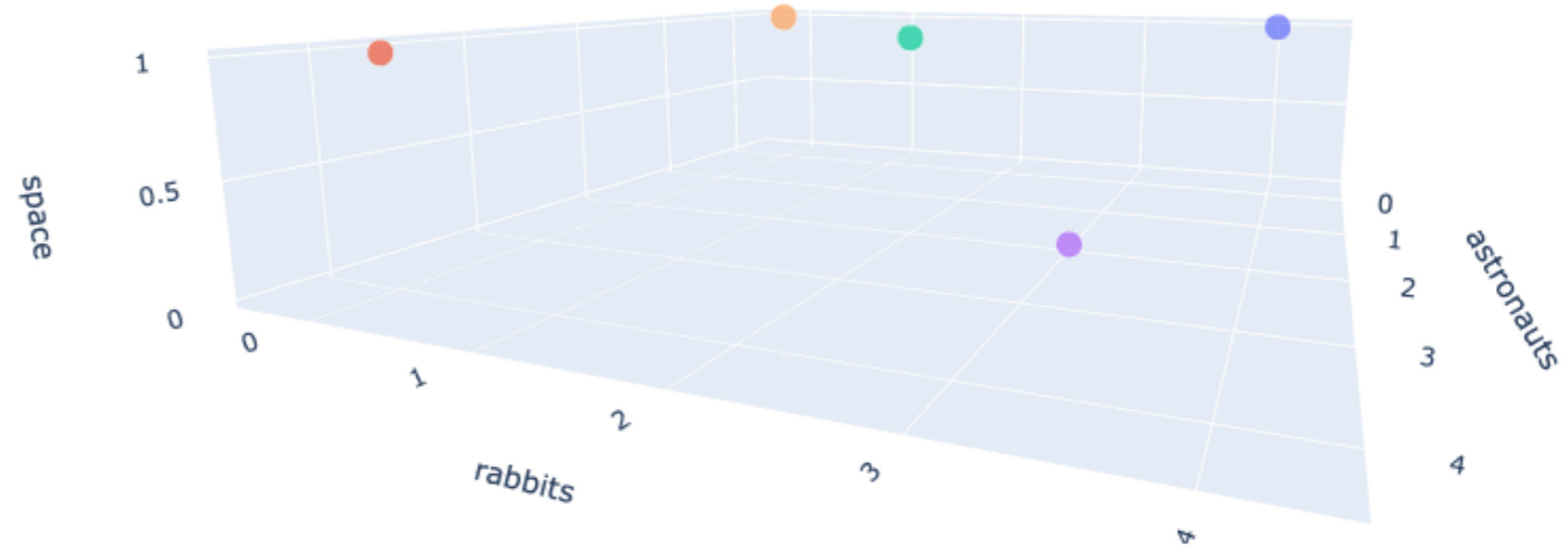
See my teaching materials on Github

github.com/Minyall/sc207_2023-24

Instruction | Digital Methods | Upskilling | Mentorship

Introducing the concept of texts in a vector space based on how many times each document says 'rabbit', 'astronaut' or 'space'

- labels
- A: All Rabbits
 - B: All Astronauts
 - C: Balanced
 - D: Balanced but more rabbit
 - E: Mentions neither



```
labels = ["A: All Rabbits", "B: All Astronauts", "C: Balanced", "D: Balanced but more rabbit", "E: Mentions neither"]
main_features = example_vectors.loc[:, ['rabbits', 'astronauts', 'space']]
main_features['labels'] = labels
main_features['marker_size'] = 10
main_features['text'] = example_texts
main_features
```

	rabbits	astronauts	space	labels	marker_size	text
0	4	0	1	A: All Rabbits	10	Rabbits do not do much in space.\nIn fact rabb...
1	0	4	1	B: All Astronauts	10	Astronauts are serious and scientific. They e...
2	2	2	1	C: Balanced	10	The previous sentences were about rabbits, and...
3	3	2	0	D: Balanced but more rabbit	10	This sentence talks about rabbits mostly becau...
4	0	0	1	E: Mentions neither	10	This sentence has had enough of the nonsense a...

Next steps: [New interactive sheet](#)

Thank You

Dr. James Allen-Robertson