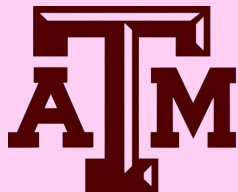


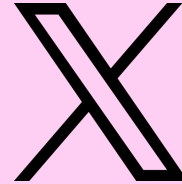
SocialPulse: An Open-Source Subreddit Sensemaking Toolkit

Stephanie Birkelbach, Maria Teleki, Peter Carragher, Xiangjue
Dong, Nehul Bhatnagar, James Caverlee
Texas A&M University, Carnegie Mellon University, Revionics

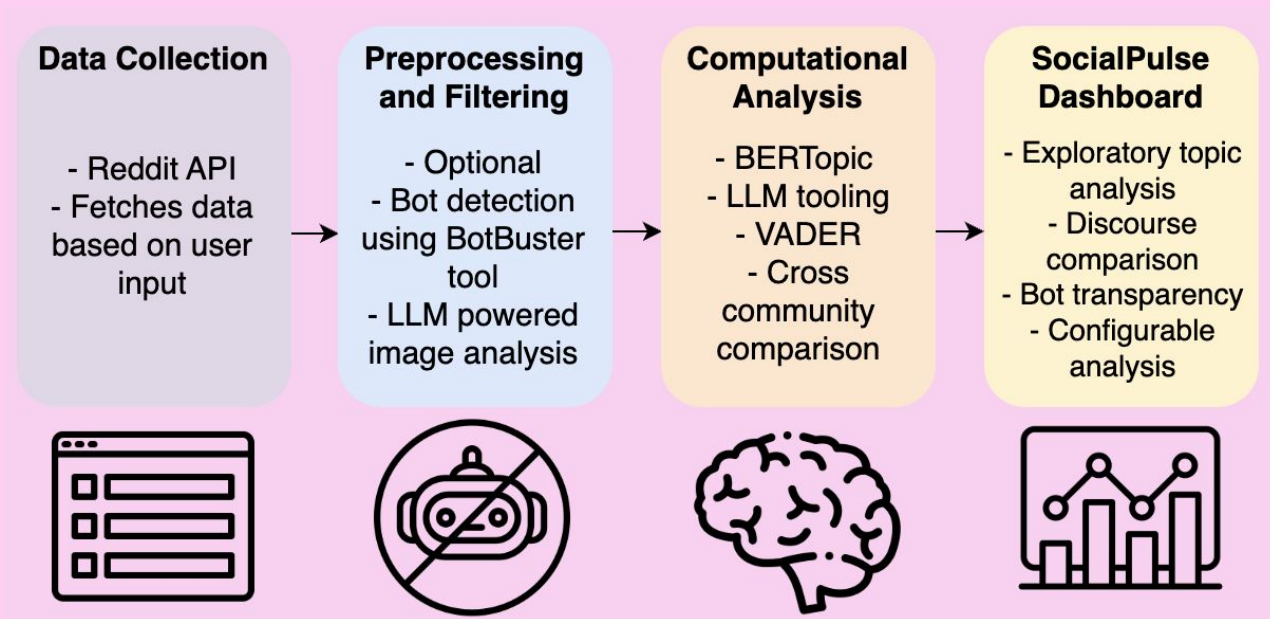


**How can we understand
how people...**

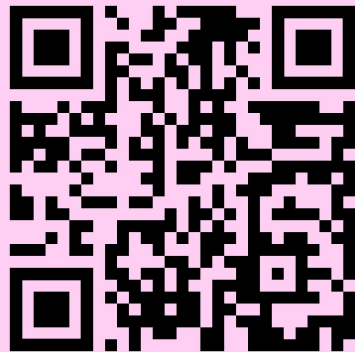
- **think,**
- **feel,**
- **and connect**
... through social media?



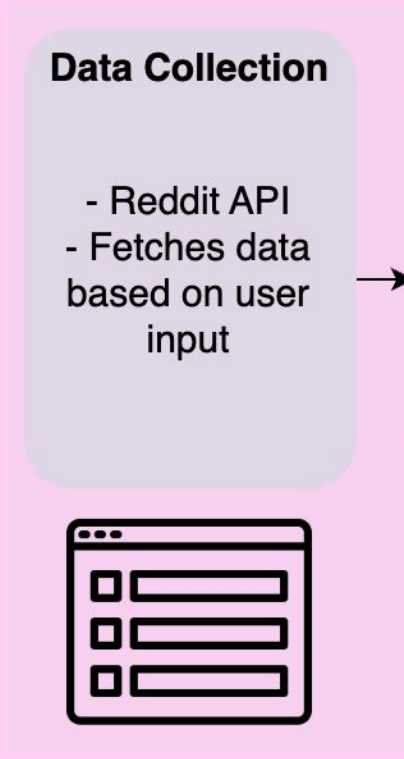
We present SocialPulse...



<https://github.com/birkelbachs/SocialPulse>



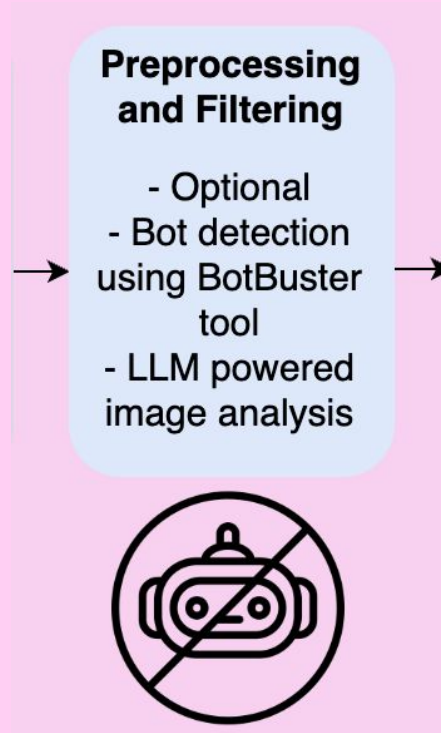
Stage 1:



<https://github.com/birkelbachs/SocialPulse>



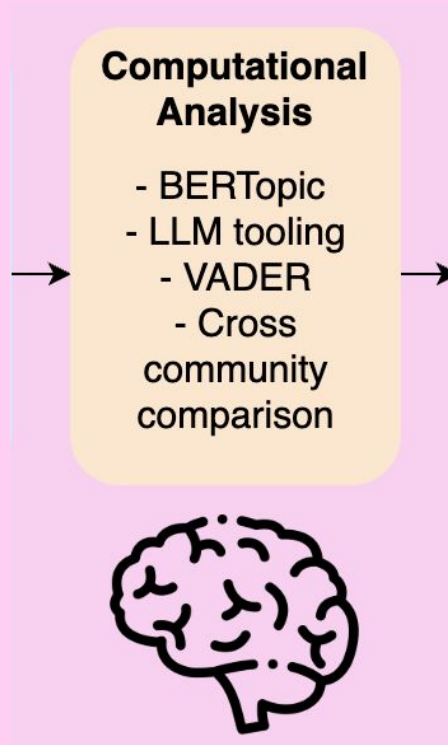
Stage 2:



<https://github.com/birkelbachs/SocialPulse>



Stage 3:



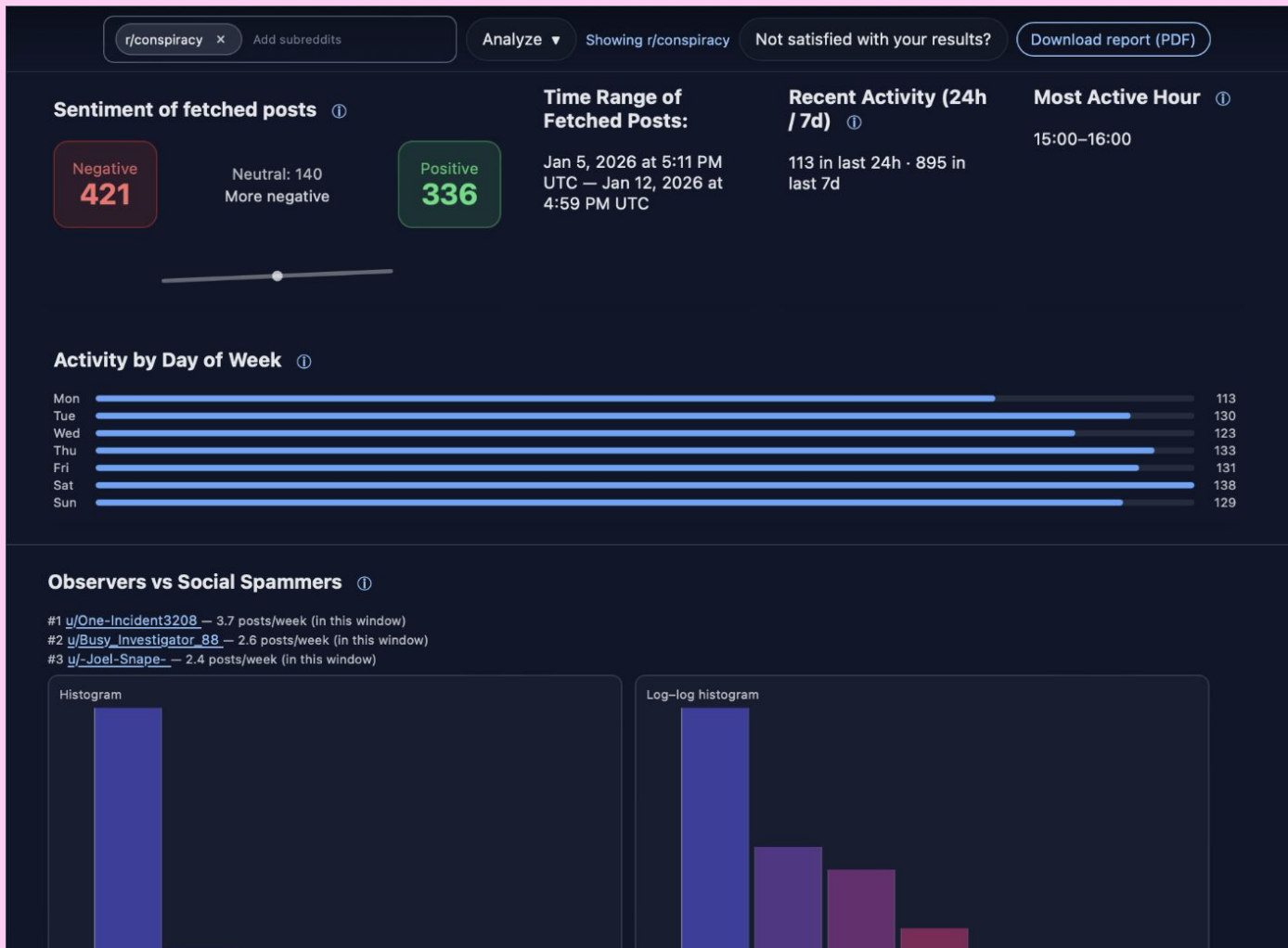
<https://github.com/birkelbachs/SocialPulse>



Stage 4:

SocialPulse Dashboard

- Exploratory topic analysis
- Discourse comparison
- Bot transparency
- Configurable analysis



Case study: r/conspiracy

 Search in r/conspiracy



r/conspiracy

Best ▾ □ ▾

 **u/Far_Pumpkin9440** · 5 hr. ago

U.S congress introduced a bill to extend veteran benefits to IDF service members...We're controlled

CONGRESS.GOV

Advanced Searches Browse

Legislation ▾ Examples: h5, sen5, "health care"

MORE OPTIONS ▾

Home ▾ Legislation ▾ 118th Congress ▾ H.R.8445

Citation □ Subscribe □ Share/Save □ Site Feedback

H.R.8445 - To amend title 38, United States Code, and the Servicemembers Civil Relief Act to provide for the eligibility of United States citizens who serve in the Israeli Defense Forces for certain protections relating to such service.

118th Congress (2023-2024)

BILL Hide Overview X

Sponsor: [Rep. Bescherbater-Guy \(R-Pa-15\)](#) (Introduced 05/17/2024)

Committees: House - Veterans' Affairs

Latest Action: House - 07/17/2024 Referred to the Subcommittee on Economic Opportunity. (All Actions)

Tracker: Introduced

More on This Bill

[Constitutional Authority and Single Subject Statements](#)

[CBO Cost Estimates \[0\]](#)

Subject — Policy Area:
Armed Forces and National Security

Summary (1) Text (1) Actions (3) Titles (1) Amendments (0) Cosponsors (1) Committees (1) Related Bills (0)

Summary: H.R.8445 — 118th Congress (2023-2024) [All Information](#) (Except Text)

☐ Listen

1.1K

98 Share

conspiracy

This is a forum for free thinking and for discussing issues which have captured your imagination. Please respect other views and opinions, and keep an open mind. Our goal is to create a fairer and more transparent world for a better future.

📅 Created Jan 25, 2008

🌐 Public

819K Weekly visitors

44K Weekly contributions

R/CONSPIRACY RULES

- 1 Bigoted slurs are not tolerated. ▾
- 2 Address the argument; not the user, the mods, or the sub. ▾
- 3 No blog spam/malicious web sites. ▾
- 4 No stalking or trolling. No threatening or abusive language. ▾

No caps lock, excessive all

Finding 1: Temporal Variation in Community Engagement

Activity by Day of Week ⓘ



Most Active Hour ⓘ

15:00–16:00

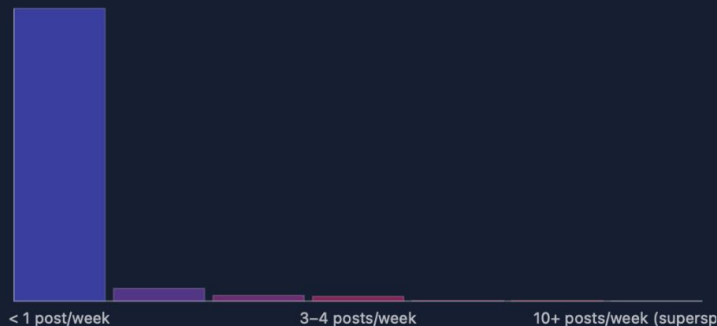
Observers vs Social Spammers ⓘ

#1 [u/Orangutan](#) — 8.3 posts/week (in this window)

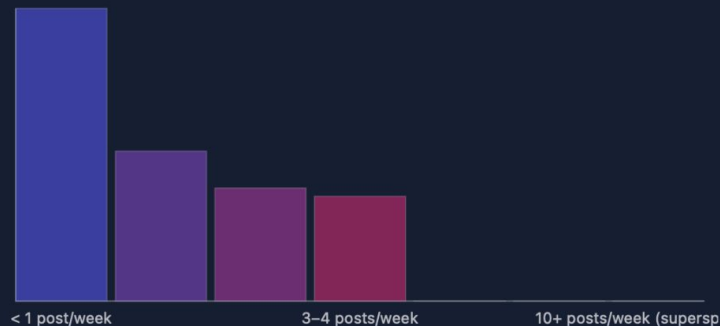
#2 [u/-Joel-Snapes-](#) — 4.8 posts/week (in this window)

#3 [u/ItalianSausage2023](#) — 3.9 posts/week (in this window)

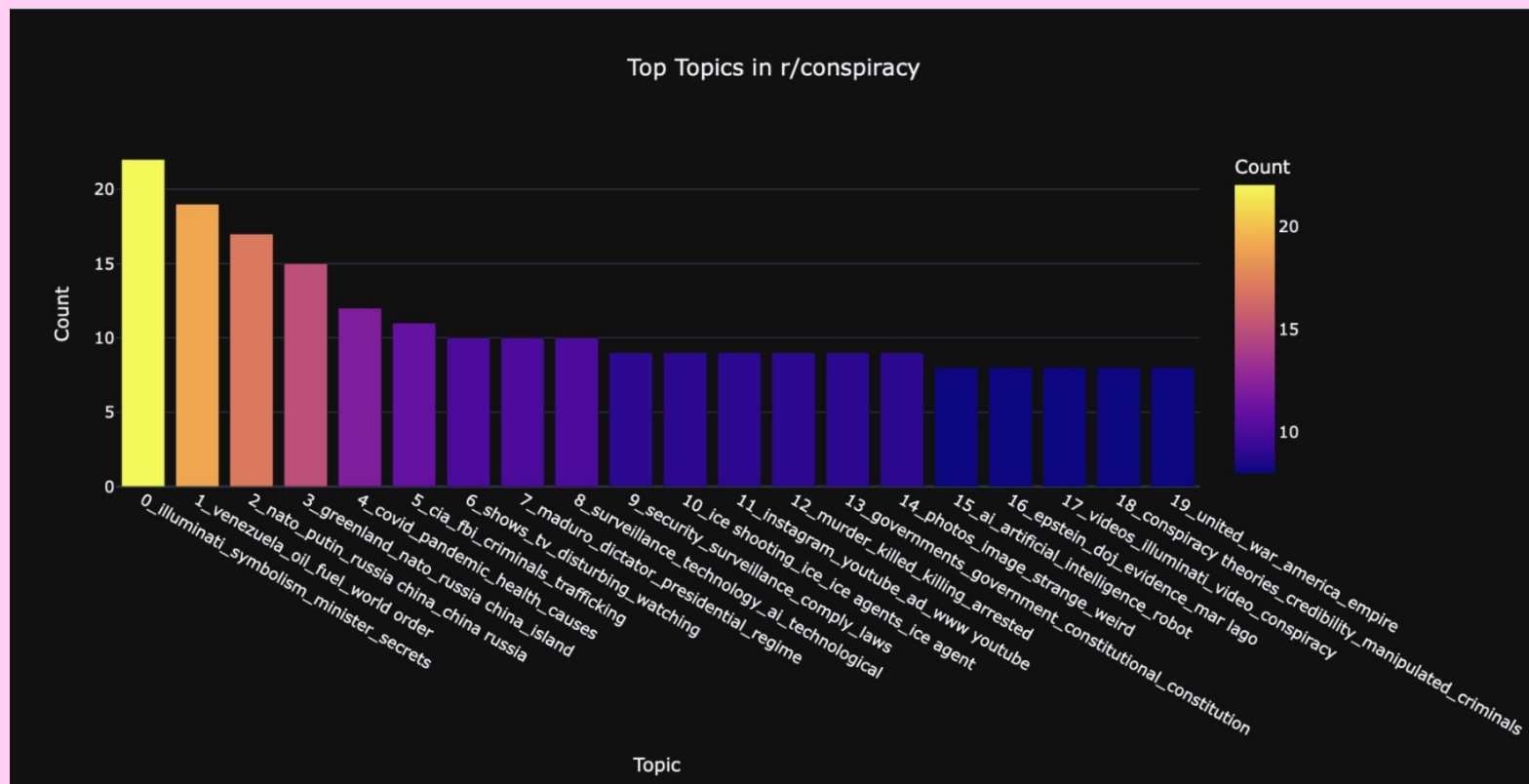
Histogram



Log-log histogram



Finding 2: Topic-Dependent Sentiment Patterns



Finding 2: Topic-Dependent Sentiment Patterns

← Back Topic Details for r/conspiracy

Topic 0 — 0_illuminati_symbolism_minister_secrets

Top Keywords

- illuminati
- symbolism
- minister
- secrets
- sovereign
- ancient
- mysterious
- org wiki
- secret
- symbols

Topic sentiment (VADER, -1 to 1):

0.47

Representative Posts

Community-wide sentiment:





SocialPulse turns overwhelming data into fast, transparent insight.



Next: discourse tracking, network analysis, crisis response



The data exists - the tools are what matter.

For all the details check out the paper:



Feel free to email birkelbachs@tamu.edu with
any questions or ideas!