Network Visualization Platform

- By Team TDD

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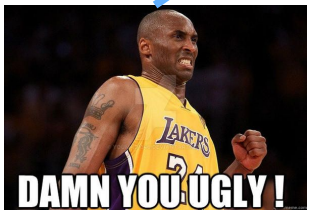
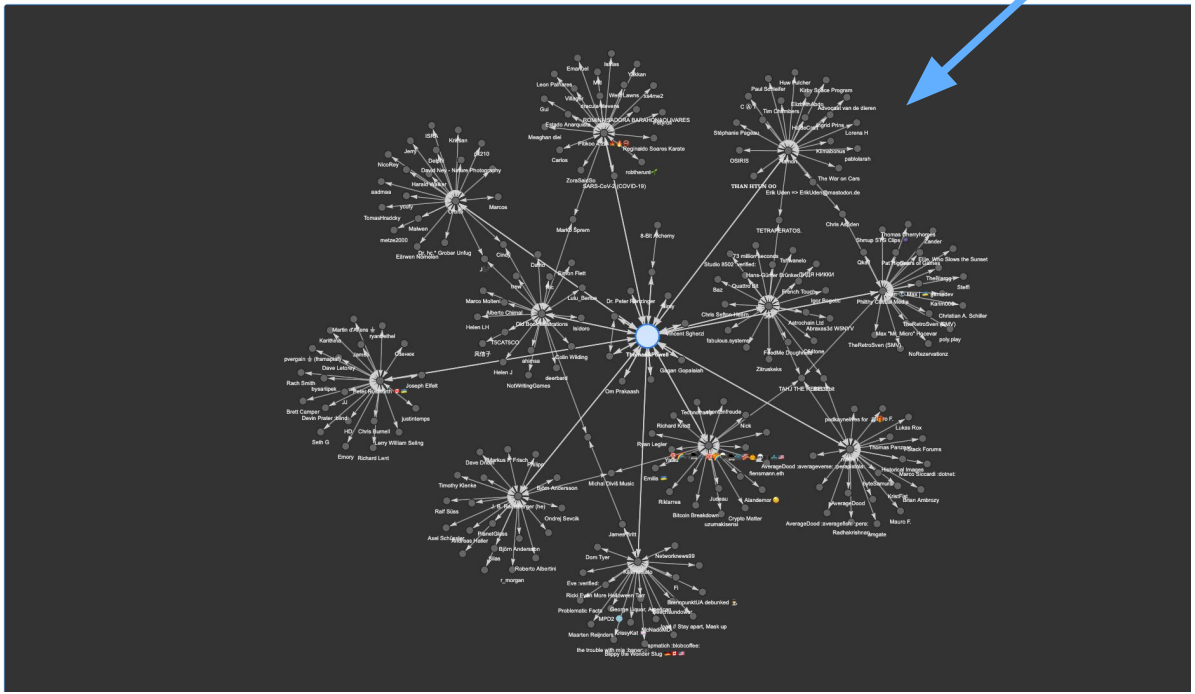
Old Frontend:

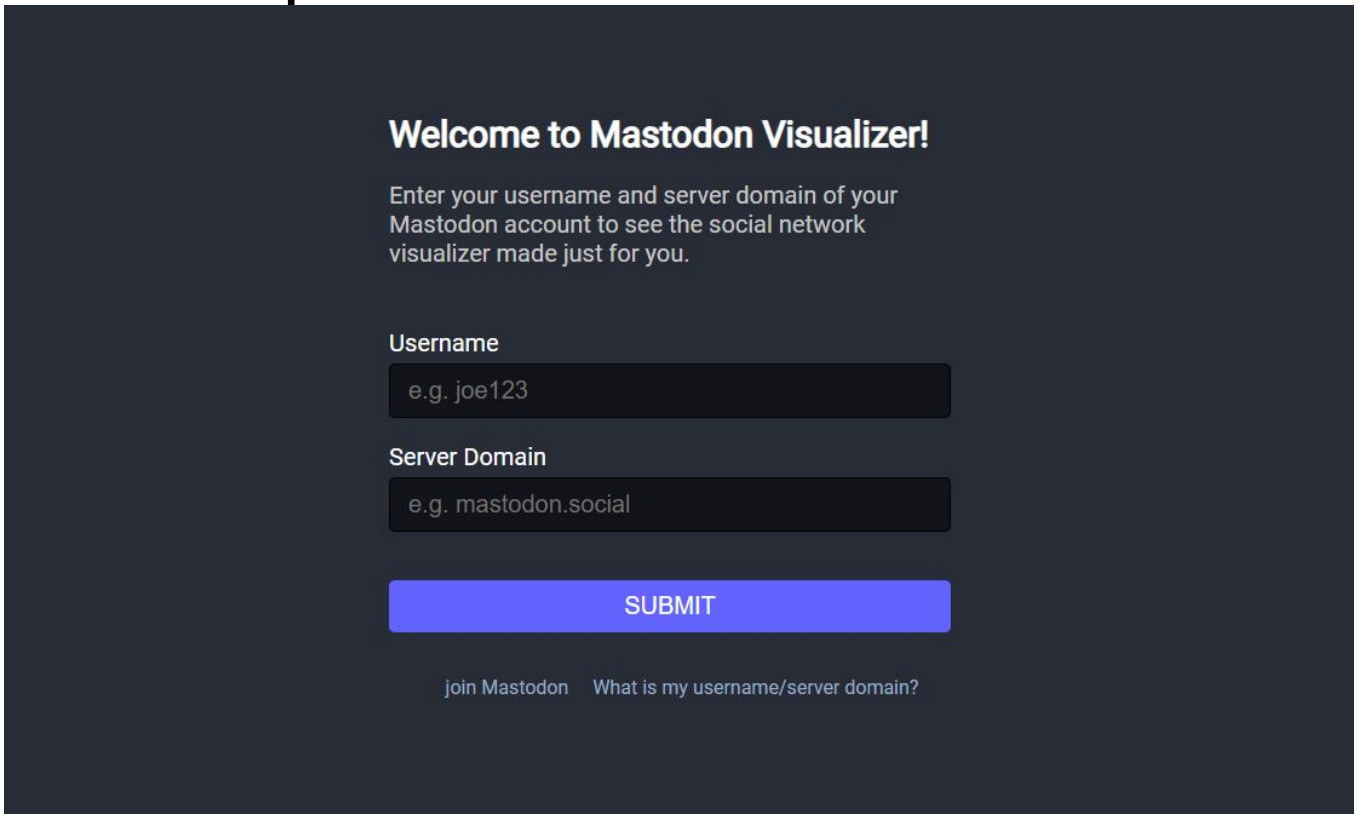


Scale nodes and edges depending on their value. Hover over the edges to get a popup with more information.

109252111498807689 Enter



Frontend Interface:



Problems Faced

1. Basic integration with backend API
2. Display the relationships
3. Updating the graph as per user entry
4. Making the website as responsive as possible

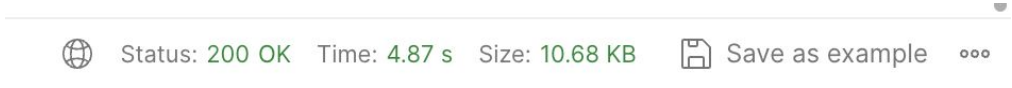
Backend

1. Initial data in nested format: ex. account1 {followers:[account2:{followers: [account4: {}, account5: {...}], following: [...]}, account3: {...} ...], ...}
2. New Version: list of nodes (account info), list of edges (following relation)

Benefits:

1. No repetitive Mastodon API calls.
2. Faster response time for max 10 followers/following for each account.
3. 40~s -> less than 5 seconds.

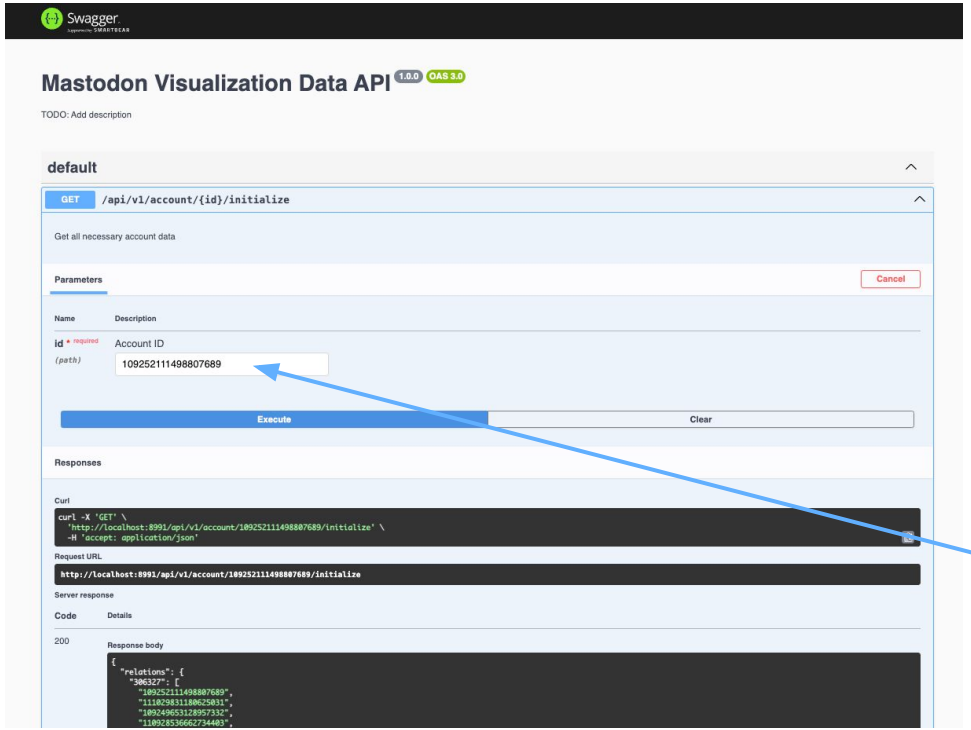
API: GET /api/v1/account/{id}/initialize



Problems Integrating Mastodon API

1. API documentation is not very helpful.
2. Each Mastodon server has their own instance of the Mastodon API.
3. Servers are not sync with each other.
4. Different results from different server’s APIs.
5. User ID on each server is different for the same user.

API Demo



Fetch ID

Receive Connections and Relations

Database Problems

1. Making the decision:
2. GunDB is difficult to query
    a. Benefits of GunDB
        i. Local-first
        ii. Lightweight and portable
        iii. Graph database
    b. Bad interface to make queries
3. Implementing proper design pattern (adaptor, dao) in JS
4. Lack of proper learning resources (Ex. Too abstract or too simple)

Continuous Integration

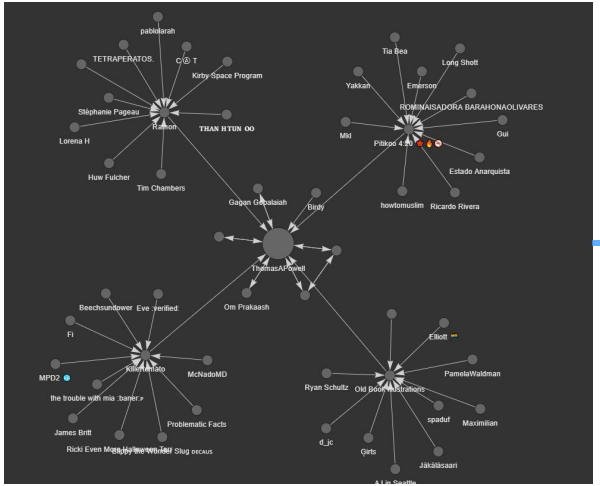
10 workflow runs — Event ▾ Status ▾ Branch ▾ Actor ▾

Attempt to test CI with the CI-test branch Node.js CI #10: Pull request #10 synchronize by Untellable	CI-setup	19 minutes ago 14s	...
test Node.js CI #9: Commit 160fd9a pushed by Untellable	CI-setup	23 minutes ago 13s	...
test Node.js CI #8: Commit ccb3c8a pushed by Untellable	CI-setup	26 minutes ago 15s	...
test Node.js CI #7: Commit 330466c pushed by Untellable	CI-setup	28 minutes ago *Failure*	...
test Node.js CI #6: Commit 3b90858 pushed by Untellable	CI-test	29 minutes ago *Failure*	...
test Node.js CI #5: Commit 664bb45 pushed by Untellable	CI-setup	36 minutes ago *Failure*	...
. Node.js CI #4: Commit b4f6f81 pushed by Untellable	CI-test	38 minutes ago *Failure*	...

Before:

After:

Results: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Kirby-Space Program
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Lorena H
Huw Fulcher
Tim Chambers
THAN HTUN OO
Tia Bea
Long Shott
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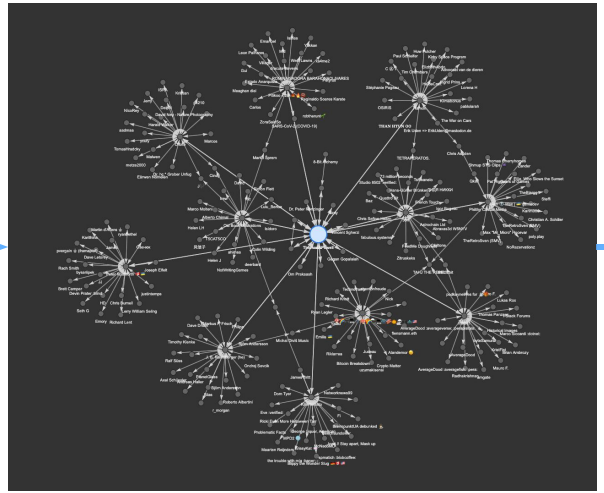

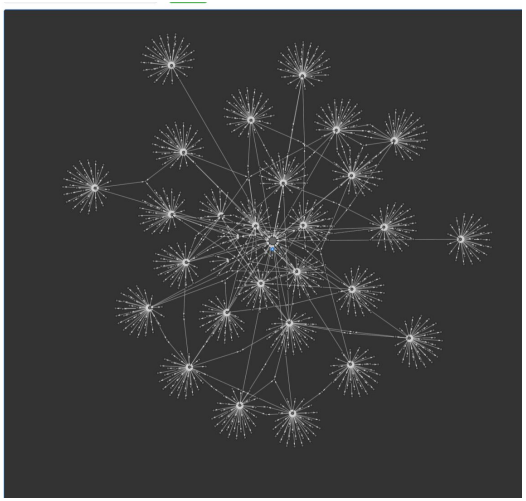

Thank You!