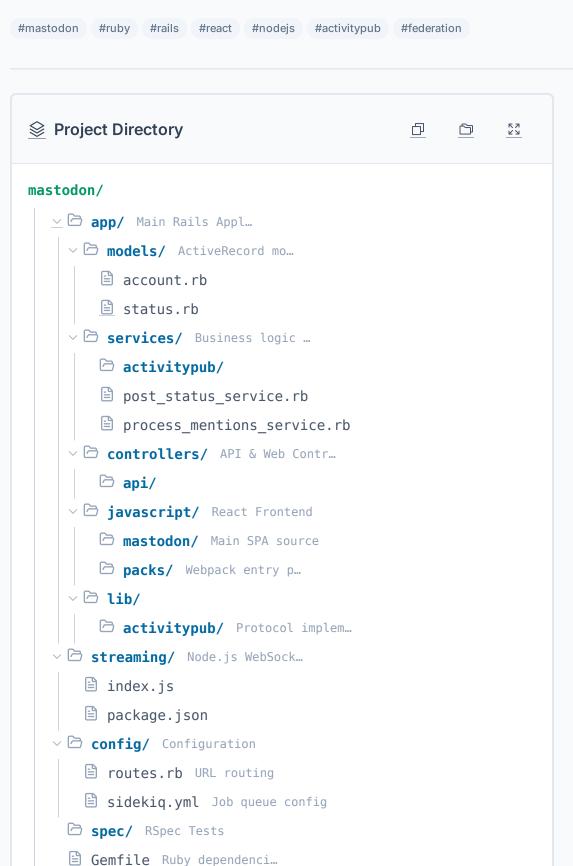


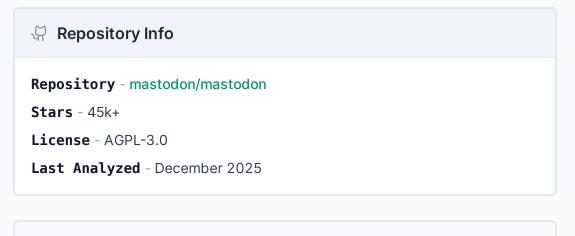
The decentralized social network server. A massive Ruby on Rails application that uses Node.js for streaming and React for the frontend.

Updated 2025-12-30



package.json JS dependencies

docker-compose.yml Dev infrastruct...

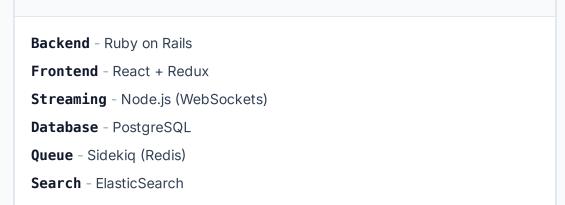


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## Architecture Notes

Mastodon is a monolithic Rails application for the most part. However, it offloads real-time updates (streaming timeline) to a separate Node.js service located in the <a href="streaming/">streaming/</a> directory. This hybrid approach allows it to leverage the rich Rails ecosystem for business logic while using Node's event loop for high-concurrency connections.

## □ Key Directories

app/services/ - This is where the magic happens. Mastodon relies heavily
on Service Objects to handle complex actions like PostStatusService
(posting a toot) or ProcessMentionsService .

**app/lib/activitypub/** - The implementation of the ActivityPub protocol. This code handles the serialization and deserialization of JSON-LD messages that allow Mastodon to talk to other servers.

app/javascript/mastodon/ - The React frontend. It's a Single Page
Application (SPA) that communicates with the Rails backend via the REST
API.

## Why This Structure?

Mastodon is the reference implementation for the ActivityPub protocol. Its codebase is a great resource for understanding how to build federated social networks and how to structure a large-scale Rails application with a modern frontend.