

Forem Project Structure


The open-source software for building modern communities. A feature-rich Ruby on Rails monolith using Preact for its interactive frontend components.

Updated 2025-12-30

#forem #ruby #rails #preact #postgresql #redis #community

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Project Directory



forem/

- app/ Rails Monolith ...
 - models/ Core domain log...
 - controllers/
 - services/ Complex busines...
 - workers/ Sidekiq backgro...
 - liquid_tags/ Custom content ...
 - javascript/ Preact frontend...
- config/ Application con...
- db/migrate/ Extensive schem...
- Gemfile
- package.json

Repository Info

Repository - [forem/forem](#)

Stars - 20k+

License - AGPL-3.0

Last Analyzed - December 2025

Tech Stack

Backend - Ruby on Rails

Frontend - Preact + TypeScript

Database - PostgreSQL

Cache - Redis

Search - Algolia / Elasticsearch

Design System - Crayons (Custom)

Architecture Notes

Forem is a mature, content-driven monolith. It follows standard Rails conventions but introduces a significant **Service Layer** (`app/services/`) to keep models and controllers lean. A standout feature is the **Liquid Tags** system, which provides a secure and extensible way to embed rich content from dozens of external platforms directly into user posts. The frontend is a hybrid, using Rails views for layout and **Preact** for highly interactive components.

Key Directories

app/liquid_tags/ - Contains the implementation for every embed type supported by Forem. Each tag defines how to parse user input and render the resulting HTML/Preact component.

app/services/ - Where the 'heavy lifting' happens. Includes feed ranking algorithms, notification dispatching, and user onboarding flows.

app/javascript/ - The home of the modern frontend. Built with Preact, it handles everything from the article editor to real-time chat and notifications.

Why This Structure?

Forem is the engine behind dev.to and many other developer communities. Its codebase is an excellent example of a high-scale Rails application that has successfully integrated a modern JavaScript framework.