

Fin Log!

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Group Introduction





What is Fin Log?

- Web based fishing log
- Record, analyze, and track catches
 - Drop pins where you catch a fish on an interactive map
 - Record weight, length, and species
- Optional AI feature
 - Helps to analyze your fish
 - Provides species and specs on the catch
- Social media aspect
 - Moderator, Admin, User
- All skill levels welcome!

Tools- Project Management & Dev Environment



★★★★★ | Version control, branching, Github Projects Kanban-style task tracking



★★★★★ | Code editing, Git tools



★★★★★ | Containerized consistent environment |



★★★★★ | Dependency and package management |



★★★★★ | Auto-restart Node backend during dev |

Tools- Backend and Database



★★★★★ | Backend runtime environment



★★★★★ | Main relational database



★★★★★ | Routing, middleware, API endpoints



★★★★★ | Password hashing for secure auth



★★★★★ | HTTP client for API requests



★★★★★ | File + image upload handling



★★★★★ | Session authentication system



Tools - Frontend & UI



★★★★★ | Core structure of UI pages



★★★★★ | Custom styling & layout



★★★★★ | Interactivity, dynamic behavior



★★★★★ | Responsive components + layout |



★★★★★ | Server-side templating engine |



★★★★★ | Interactive maps



★★★★★ | Free map tiles

★★★★★ | AI image analysis (fish detection)



Methodology!





Tools - Testing



| Assertion library & HTTP/API integration tests |



| Cloud deployment platform |

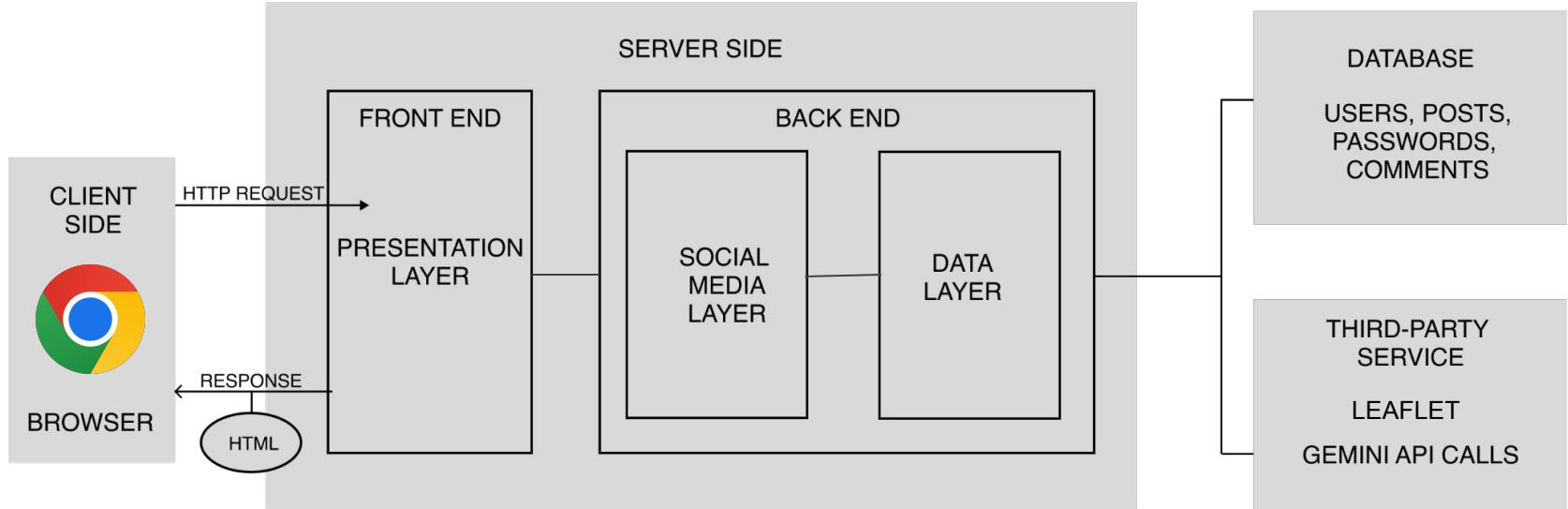


| Collaborative coding for complex work |

Code Reviews (PRs) |  | Collaboration + quality control



Architecture Diagram





Challenges

Cross-machine consistency issues.

- We struggled to ensure that code working on one team member's computer worked reliably on others, due to differences in local environments and configurations. Fixed through clear [Docs.md](#) documentation.

Refactoring file and folder structure

- We had challenges reorganizing our project file/folder layout while maintaining important paths. Fixed through project pause, one person changing all paths, and large scale testing afterwards.

Managing GitHub branches and merge conflicts

- We ran into difficulties handling branching, merging, and resolving merge conflicts, especially when multiple people were editing overlapping parts of the project. Each trained git literacy to ensure maximum efficiency when handing our repo.

Future Enhancements

Additional Functionality

Moderator Dashboard:

- Clear instructions for moderators
- Voting area for contested posts

Fishing Map:

- Location search inside of the map

Moderation

Moderator Recruitment

- Active community members
- Vetting process
- Vote on reported posts

Moderator Supervisor

- Looks at contested posts
- Ensures moderator quality

Communitiesvg

Community

Informational Content

Gear Marketplace

Demo