LLM Prompt Repository for Scientific Workflows

A Lightweight Web Platform for Sharing and Browsing LLM Prompts

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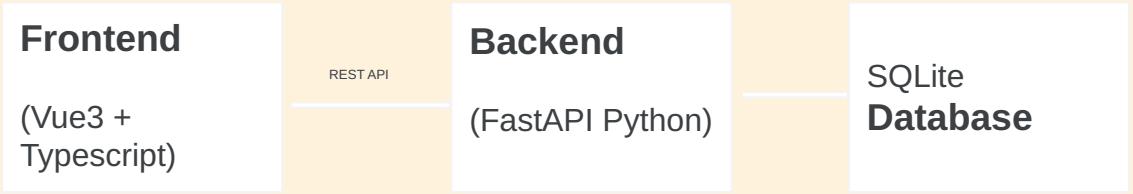
Problem & Goal

- Social scientists increasingly use LLMs in research workflows.
- Effective prompts are hard to design and often recreated repeatedly.
- No simple way to share and reuse prompts across researchers.

Build a lightweight web platform where users can:

- Browse prompts shared by others
- Add new prompts anonymously
- Immediately benefit from example prompts

System Architecture



Design Characteristics

- Stateless Backend
- Simple REST API (create , read)
- Separation of UI, API, and storage Layers
- Easy future migrations

BACKEND DESIGN

Backend responsibilities

- Expose REST endpoints
- Validate prompt submissions
- Store and Retrieve prompts
- Seed initial prompts

Key Design Decisions

- Repository Pattern isolates DB logic
- Pydantic models validate requests
- Stateless API simplifies scaling
- DB layer easily replaceable

ENDPOINTS

- GET /api/prompts
- POST /api/prompts
- GET /api/prompts/{id}

FRONTEND DESIGN

Frontend responsibilities

- Display prompt list
- Filter and search prompts
- Submit new prompts

Key Design Decisions

- Vue components separated by responsibility
- Centralised API service layer
- Environment based API configuration
- Client side filtering for MVP simplicity

User Flow

Browse Prompts

Add Prompt

Immediately Visible

LIMITATION AND FUTURE IMPROVEMENTS

Current Limitations

- No Pagination
- Basic keyword search
- SQLite limits concurrency

Future Improvements

- PostgreSQL for scalability
- Server side search and filtering
- Semantic search using embeddings
- Prompt rating and moderation
- Usage analytics

THANK YOU!