



# Gallera

## Your galleries, your way.

Developed by Francisco Gonzalez



## System Features & Technical Design

### Functional Requirements

- Users can register, log in, and access their personal dashboard.
- Users can create new galleries with a title and description.
- Each gallery can have an unlimited number of photos.
- Photos support captions, editing, and optional replacement.
- Users can delete their own galleries or photos.
- The system prevents users from editing galleries they do not own.
- All galleries can be viewed publicly on an All Galleries page.
- Galleries display photos in a clean, responsive layout.

### Product Specifications

- **Frontend:** HTML, CSS, Thymeleaf templates
- **Backend:** Spring Boot (Java), MVC architecture
- **Database:** PostgreSQL hosted on Neon
- **Authentication:** Spring Security (password hashing with BCrypt)
- **Hosting:** Cloud deployment on Render
- **Image Storage:** External image hosting (ImgBB/Cloudinary) instead of server file storage
- **Development Tools:** GitHub, VS Code

### Standards Followed

- Secure authentication using industry-standard encryption
- REST-style routing structure for all controllers
- Follows Model-View-Controller separation of concerns
- SQL relational database design with enforced foreign keys
- Responsive web layout for accessibility

## Development Process & Data Overview

### Development Process

The project started with defining the user experience and identifying the main features—user accounts, galleries, photo uploads, permissions, and public viewing. After planning the database design, the backend was built using Spring Boot with separate layers for controllers, services, and repositories. Once the backend was stable, frontend pages were created using Thymeleaf and styled to match a clean gallery layout. Deployment came last, connecting everything to a cloud database and testing that all features worked on a live environment.

### Design Highlights

- Simple, clean interface for adding and managing photos
- Secure permission checks so users can only edit their own galleries
- Public browsing so visitors can explore all galleries created by any user
- Smooth integration between backend, database, and front-end templates

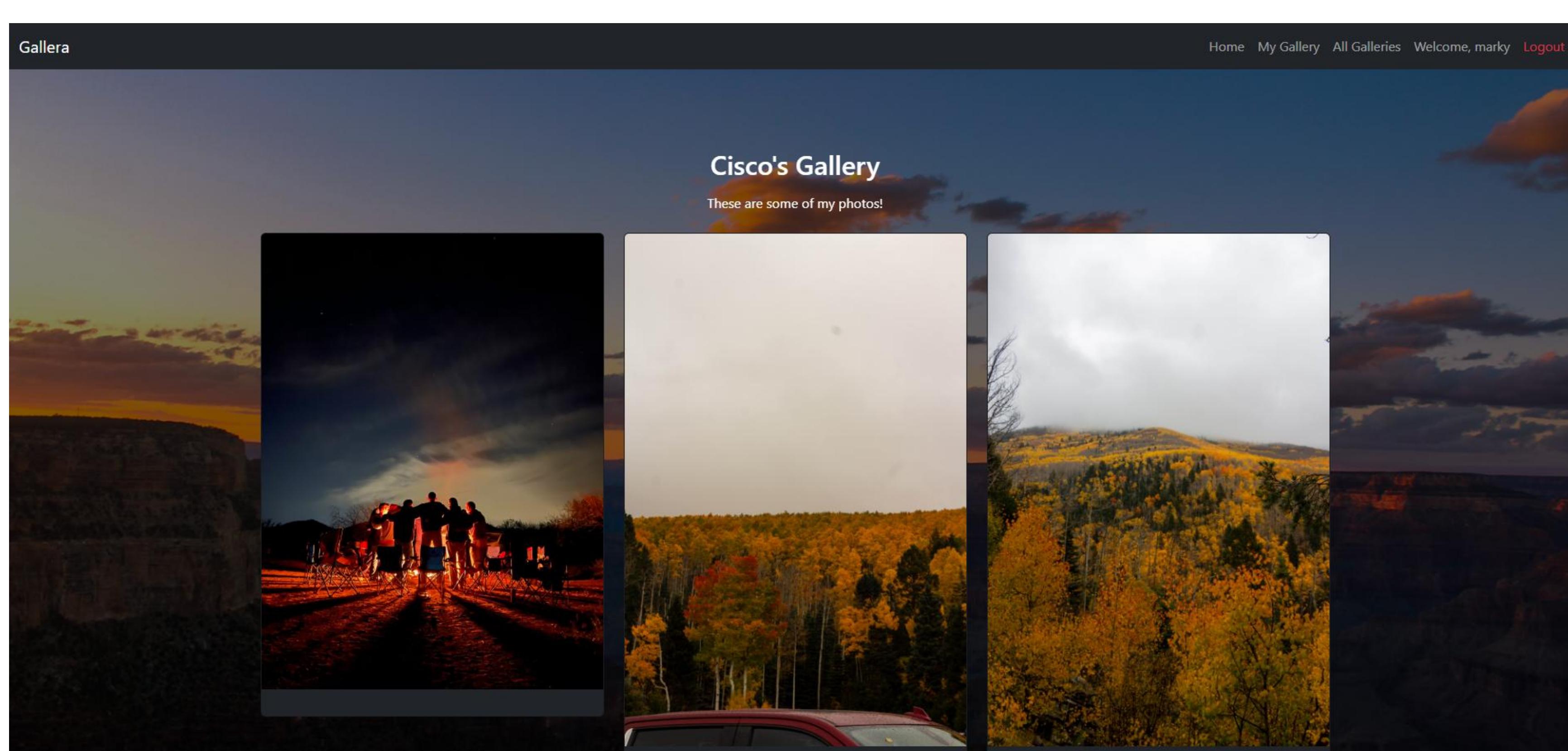
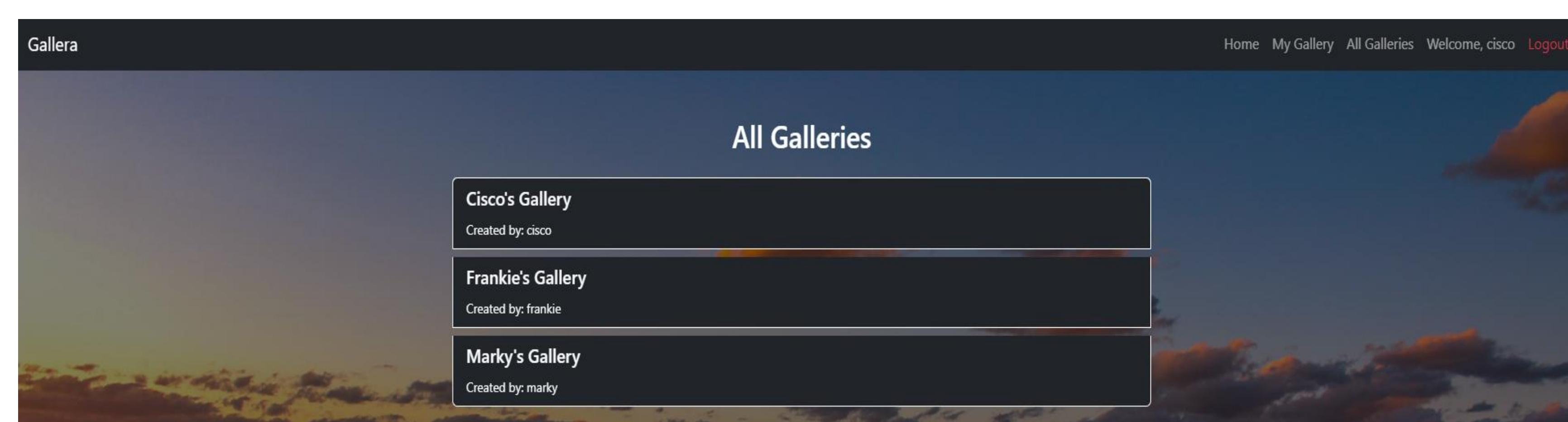
### Data Summary

- **Users Table:** stores account info and login credentials
- **Galleries Table:** links each gallery to the user who created it
- **Photos Table:** stores file URLs and captions for each photo

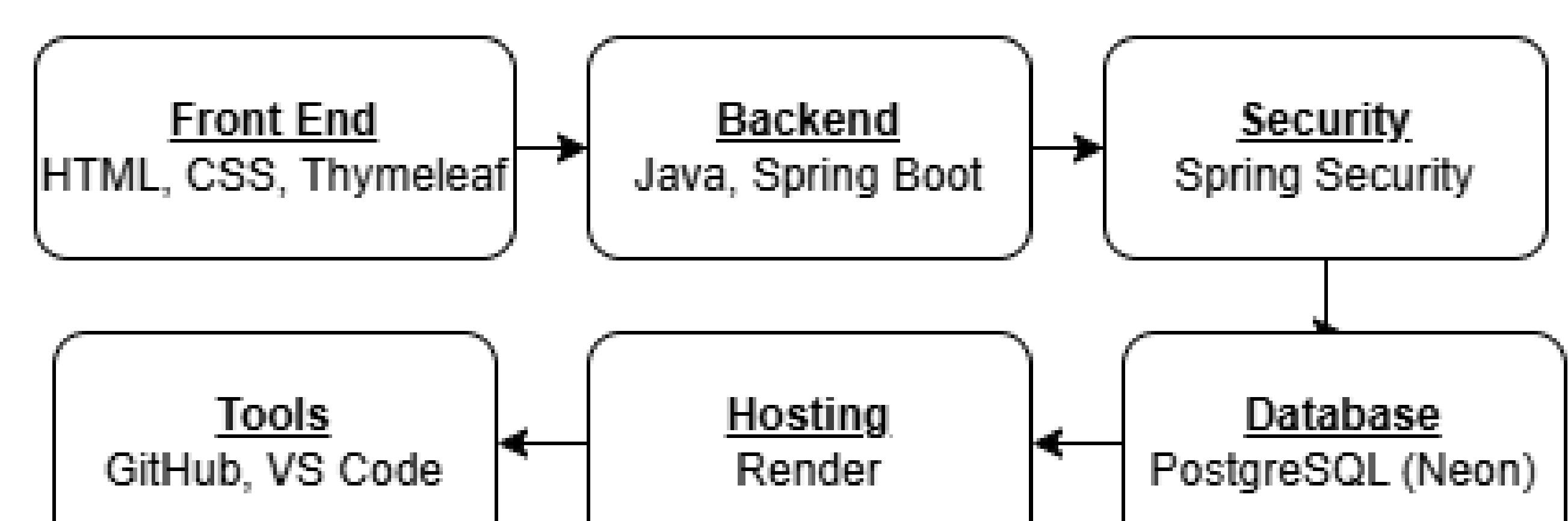
## About the Project

Gallera is a simple and user-friendly web app where anyone can create their own photo galleries and share them online. Users can upload photos, organize them into galleries, edit them later, and view galleries made by other people. The goal is to give people like photographers, students, hobbyists, or anyone with pictures a place to display their work without needing technical skills.

Most gallery or portfolio platforms require people to pay for hosting, learn coding, or use complicated software. Gallera solves that problem by offering a clean, free, and easy way to build and manage your own gallery pages. Everything runs through a modern web interface, and users stay in full control of their content.



### Tech Stack Overview



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