

COLLABORATIVE ACTION RESEARCH CENTER PROJECT

CASE STUDY



1. PROJECT OVERVIEW

ProjectName: CollaborativeAction Research Center Website

Platform Type: Fully custom-built web application (no CMS used)

Tech Stack: HTML, CSS, Bootstrap, JavaScript, AJAX, PHP, MySQL

Duration: ~2 Months

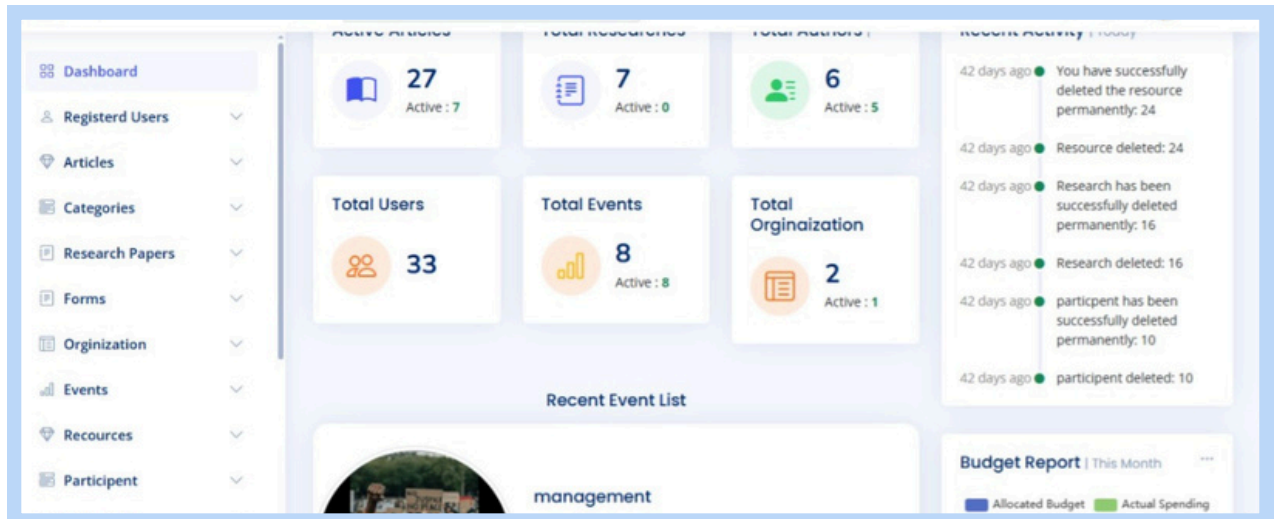
MyRole: Full-stack developer (Design + Backend + UX + Logic)

2. OBJECTIVE

To develop a dynamic research-focused website where the client can manage all research-related data through an advanced custom admin panel and allow public users to browse articles, blogs, and resources with powerful search functionality.

3. ADMIN PANEL FEATURES (FULLY CUSTOM)

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Articles Management

Add, Edit, Delete, Soft Delete, Manage, Restore

Choose layout (1, 2, or 3) per article

Article Tags

Full tag CRUD + soft delete and restore

Authors

Manage complete author details

Add, Edit, Delete, Restore functions

Categories

Handle Parent + Child categories

Full CRUD + soft delete and restore

Events

Event Types: Webinar, Seminar, Workshop, Conference

Online/Offline logic with different UI render

Full CRUD + soft delete and restore

Organizations

Store all organization details

Link events to respective organizations

Full CRUD + soft delete and restore

Research Papers

Manage research papers with metadata

Full CRUD + soft delete and restore

Participants

Register participant bio during events

Full CRUD + soft delete and restore

Reservations

Manage seat bookings for events

Full CRUD + soft delete and restore

Resources

Handle multiple resource types: video, image, dataset URL, PDF

Validate file type, size, and format

Full CRUD + soft delete and restore

Global Tags System

Tags used across articles, resources, research papers, etc.

Admin Authentication

Secure login and access control

Activity Log Track every action: Add, Edit, Delete with timestamps Real-time admin panel visibility for activity tracking

4. USER (FRONTEND) SIDE FUNCTIONALITY

Registration & Login (AJAX-Based) Server-side + client-side validation Email confirmation, forgot password with token system in DB **Public Access** View articles, blogs, resources Browse event listings Download/view permitted files **Advanced Search System** Search by: Tags Categories Alphabetical (A-Z) Keyword match Results are instant and filterable

5. TECHNICAL HIGHLIGHTS

Custom admin panel, no frameworks or CMS used AJAX for seamless operations (no page reloads) File validation (type, size) using PHP Complex DB relationships handled cleanly (many-to-many with tags, authors) Fully secure authentication system

REST-style logical structuring without using Laravel or WordPress

6. CHALLENGES & SOLUTIONS

✓ **Soft Delete + Restore:**

Built full trash system manually, allowing admins to restore any deleted item.

✓ **Organization ↔ Events Handling:**

Created linking logic where events auto-connect to the correct organization and display in event listings accordingly.

✓ **Secure File Handling:**

Each resource type has strict upload validation (PDFs, URLs, datasets).

✓ **Dynamic Layout Choices for Articles:**

Admin can choose between multiple layout options for article display — controlled via backend.



7. OUTCOME

- ✓ Fully functional platform delivered
- ✓ Admin gained complete control over content, participants, and events
- ✓ Public users get clean access to resources, blogs, and research
- ✓ High performance, secure, and user-friendly interface
- ✓ Project served as a major full-stack milestone

8. WHAT I LEARNED

How to build enterprise-level admin panels
manually Soft delete architecture and file
management in PHP Advanced relational DB design
Optimizing search and filter logic AJAX integration
for real-time smooth experience