

VolunMe – Turning Free Time into Meaningful Action

Final Report

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Course: Human–Computer Interaction

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1. Project Idea

The main idea behind VolunMe is to create a web application that connects people who want to volunteer with organizations and community events that need help. Many individuals spend their free time unproductively, often scrolling social media or playing games, while at the same time communities lack volunteers for meaningful activities. VolunMe aims to bridge this gap by offering a centralized, simple, and motivating platform where volunteering opportunities are easily accessible. The goal of the application is to transform free time into positive social impact and encourage users to contribute to their communities.

2. Problem Definition

Currently, volunteering opportunities are scattered across multiple platforms such as social media, websites, and physical notice boards. This lack of centralization makes it difficult for volunteers to discover suitable activities and for organizations to reach potential helpers. As a result, many volunteering opportunities remain unused, and people willing to help often do not know where to start.

3. Proposed Solution

VolunMe provides a user-friendly web application that allows users to browse volunteering events, filter activities by location and type, join or withdraw from events, create new activities, and receive notifications. Administrators approve and moderate activities to ensure content quality and platform safety.

4. Target Users

Primary users include students, working professionals, retirees, and community-oriented individuals who want to contribute to society. Secondary users are NGOs, local organizations, and event organizers who need volunteers. The platform is also designed for users seeking social interaction, teamwork, and a sense of belonging through volunteering.

5. User Personas

User personas were created to better understand user needs.



Ana – Student Volunteer

- **Age:** 20
- **Occupation:** Psychology Student
- **Location:** Split
- **Goals:** Gain experience, help community, meet people
- **Motivation:** Loves helping others
- **Frustration:** Disorganized volunteering information
- **Quote:** “I want to help, but I don't know where to start.”



Marko – Event Organizer

- **Age:** 35
- **Occupation:** NGO Coordinator
- **Location:** Zagreb
- **Goals:** Find volunteers, manage events efficiently
- **Motivation:** Wants centralized platform
- **Frustration:** Posting events on multiple platforms
- **Quote:** “I wish there was one place where all volunteers could see our events.”*



Ivana – Working Professional

- **Age:** 42
- **Occupation:** Teacher
- **Location:** Zadar
- **Goals:** Short-term volunteering opportunities
- **Motivation:** Personal fulfillment
- **Frustration:** Lack of flexible options
- **Quote:** “I’d love to help, but I need something that fits my time.”



Marija – Retired Volunteer

- **Age:** 65
- **Occupation:** Retired nurse
- **Location:** Šibenik
- **Goals:** Stay active and socially engaged.
- **Motivation:** Feels useful and fulfilled when contributing to society
- **Frustration:** Finds technology sometimes confusing and complex
- **Quote:** “I still have time and energy — I just need a simple way to help.”

6. Information Architecture

The information architecture of the VolunMe application is designed to ensure clear navigation, simplicity, and quick access to core functionalities for both regular users and administrators. The application entry point is the *Home* page, which serves as an introduction to the platform and explains its purpose. From the *Home* page, users can easily choose to log in or register, ensuring a clear and intuitive onboarding process.

6.1 User Role

For regular users, the *Home* page presents a brief overview of the application, its mission, and an “About” section that explains how volunteering through VolunMe

works. The **Activities** section represents the core of the application. It displays a list of all available volunteering events. Users can filter activities by location and activity type, allowing them to quickly find opportunities that match their interests and availability. Each activity includes visible participant counts and options to join or withdraw from an event. Users can also create new activities, which must be approved by an administrator before becoming publicly visible. The **Notifications** section enables users to view event-related updates and messages.

6.2 Admin Role

Administrators have access to a dedicated **Admin Panel**, where they can review and approve newly created activities, delete inappropriate or outdated events. This role ensures content quality, platform safety, and proper moderation of user-generated content.

6.3 Sitemap

The sitemap represents the hierarchical structure of the VolunMe application and illustrates how users navigate between different sections. The main navigation includes **Login/Register**, **Home**, **Activities**, and **Notifications**. From the Activities page, users can access Activity Details pages. This structure ensures logical navigation, reduces cognitive load, and allows users to access key features quickly and efficiently.

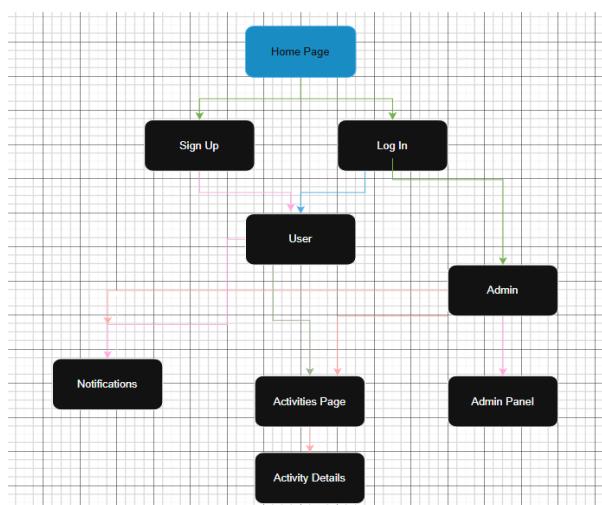


Image - Sitemap

7. Design and User Interface

The user interface follows modern, minimalistic design principles with a focus on clarity, consistency, and ease of use. The layout is designed to be intuitive for users of all ages, including older users with limited technical experience.

7.1 Home Page

The Home Page introduces the application, shows its purpose, and guides users to explore volunteering opportunities.

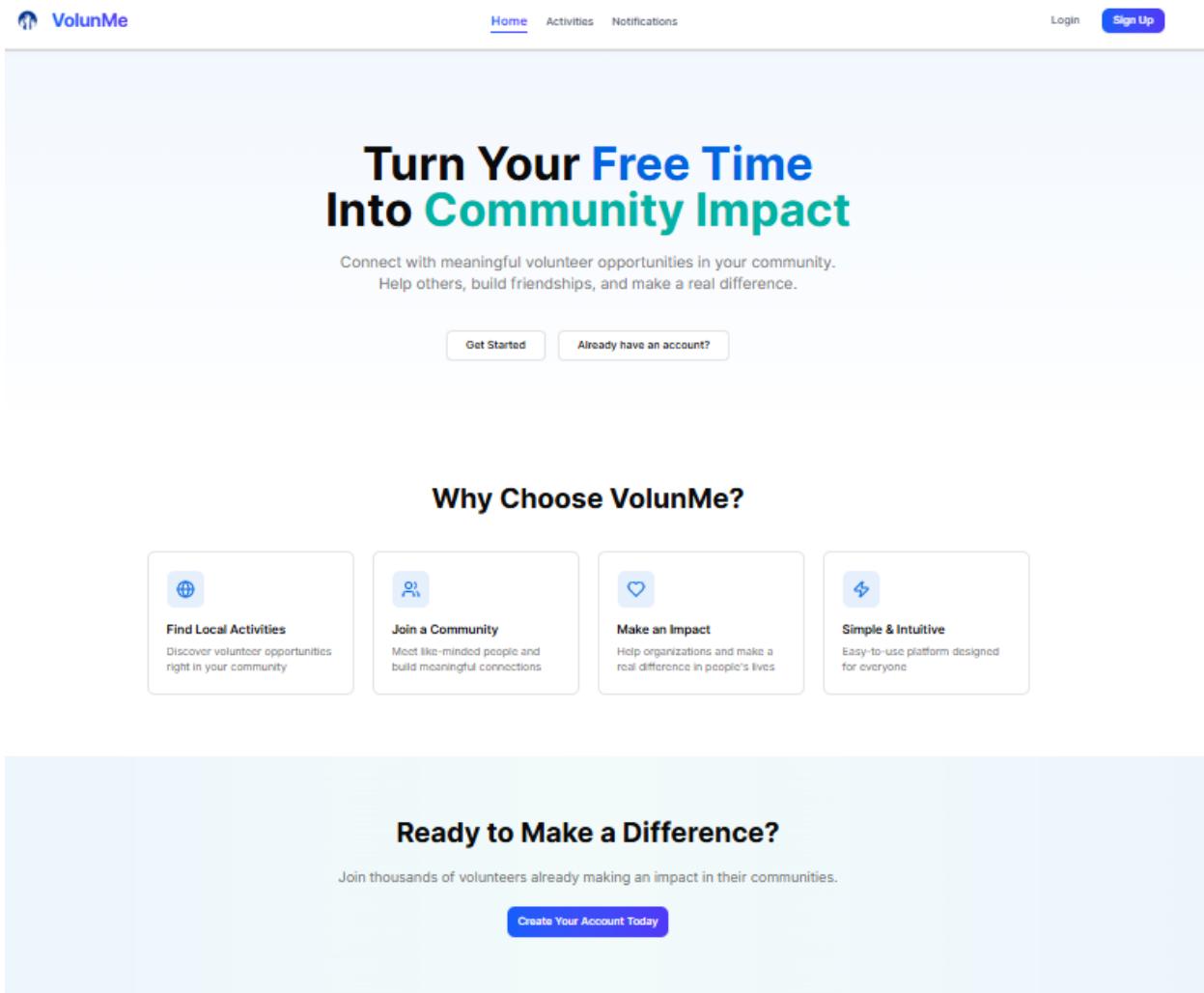


Image - Home Page

7.2 Activities Page

This page lists all volunteering events, with filters by location and type. Users can join or withdraw from events and view participant counts.

Volunteer Activities

Find meaningful opportunities to make a difference in your community

Filters

Date

- All Dates
- Today
- Tomorrow
- This Week
- Next Week
- This Month
- Next Month
- Upcoming
- Past Events

Category

- All Categories
- Health
- Environment

All Activities

Page 2 of 2 • 2 results

Search by title, description, location, or organizer...

Planinarenje health Tue, Feb 24, 2026 00:00

Planinarski izlet od zvjezdanog sela do vrha planine. Ponijeli vodu i hranu.

Available spots 29 / 30

Mosor admin

Čišćenje rijeke Jadro environment Fri, Feb 27, 2026 00:00

Pridruži nam se na volonterskoj akciji Čišćenja rijeke i dopriniš očuvanju naše prirode! Zajedn...

Available spots 28 / 29

Izvor rijeke Jadro user

Page 2 of 2 • 2 total pages

< Previous 1 2 Next >

Image - Activities Page

7.3 Activity Details

Shows more information about a specific event, including description, date, location, and participant list.

Planinarenje health

Planinarski izlet od zvjezdanog sela do vrha planine. Ponijeli vodu i hranu.

Activity Details

Date Tuesday, February 24, 2026 Time 00:00

Location Mosor Open in Maps

Capacity 29 spots available out of 30 Many spots available

Ready to Volunteer?

Join 1 other volunteer in this meaningful activity

Log In to Apply

Activity Organizer

admin admin@volunme.com

About This Activity

Planinarski izlet od zvjezdanog sela do vrha planine. Ponijeli vodu i hranu.

This volunteer opportunity is open to anyone interested in making a positive impact.

Image - Activities Details

7.4 Admin Panel

The Admin Panel allows administrators to approve or deny new activities and delete events.

The screenshot shows the 'Pending Activities' section of the Admin Dashboard. It displays two pending activity submissions:

- Sports**: Submitted Jan 12, 2026. Status: Pending Review. Organizer: admin, admin@volunme.com. Date: Wed, Jan 14, 2026. Time: 00:12. Location: vstdvasdvasdv. Capacity: 30 volunteers. Approval buttons: Approve (green) and Reject (red).
- Environment**: Submitted Jan 14, 2026. Status: Pending Review. Organizer: Kristian Baja, kiba@gmail.com. Date: Sat, Mar 14, 2026. Time: 08:30. Location: Park Šuma Marjan. Capacity: 150 volunteers. Approval buttons: Approve (green) and Reject (red).

Image - Admin Panel

7.5 Login / Registration

The entry point for users to log in or register. Forms are simple and clear, ensuring easy onboarding for all age groups.

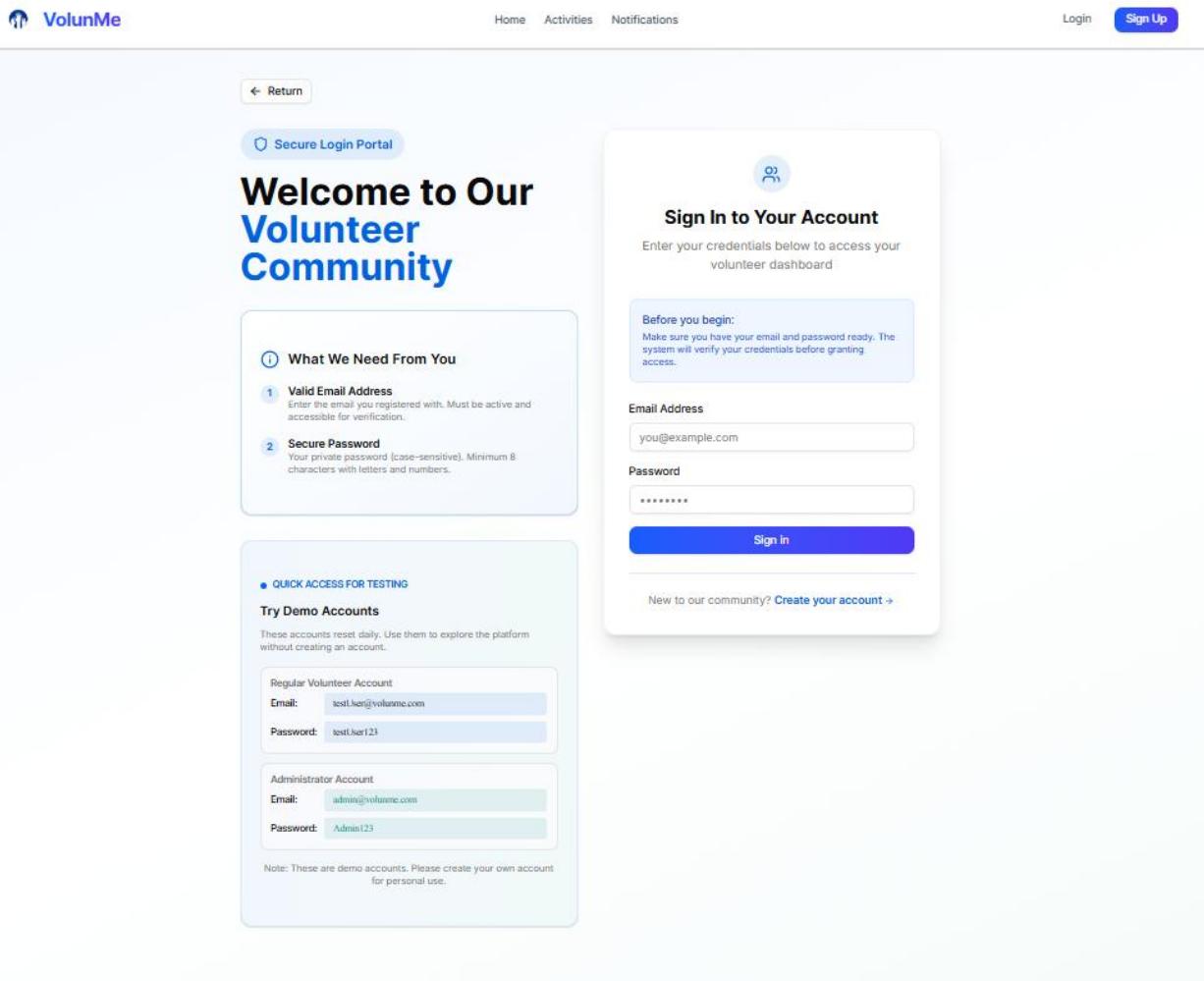


Image - Login Page

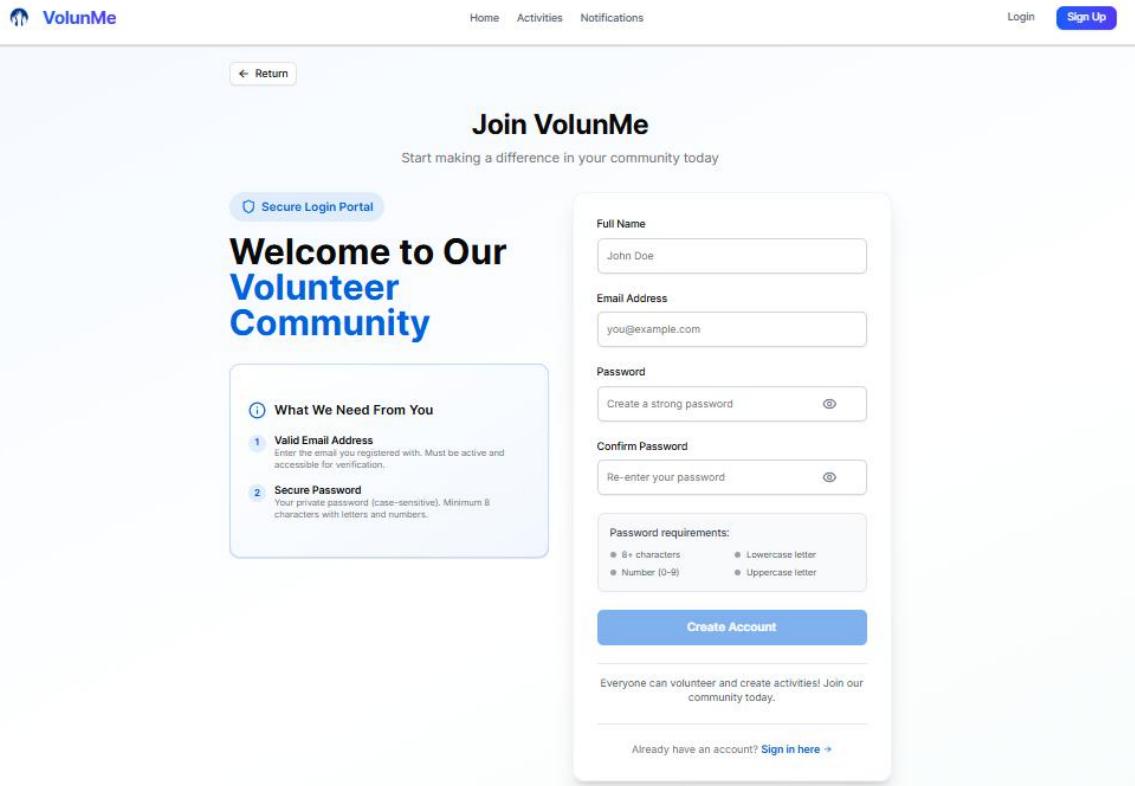
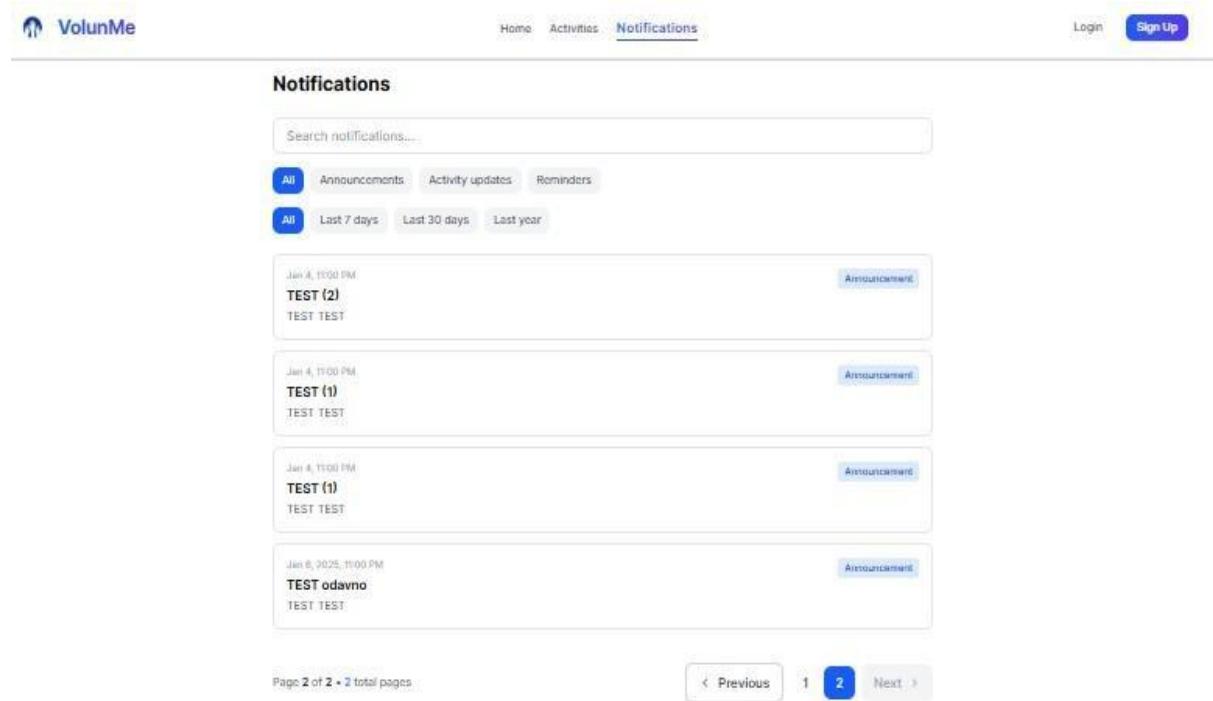


Image - SignUp Page

7.6 Notifications

The entry point for users to view and send notifications related to events. The Notifications section enables users to view event-related updates and messages.



The screenshot shows the VolunMe Notifications page. At the top, there is a navigation bar with links for Home, Activities, Notifications (which is underlined), Login, and Sign Up. Below the navigation bar is a search bar labeled "Search notifications...". Under the search bar are two sets of filter buttons. The first set includes "All", "Announcements", "Activity updates", and "Reminders". The second set includes "All", "Last 7 days", "Last 30 days", and "Last year". The main content area displays four notification items in a grid format. Each item has a timestamp, a title, a description, and a category label. The notifications are as follows:

Timestamp	Title	Description	Category
Jan 8, 11:00 PM	TEST (2)	TEST TEST	Announcement
Jan 4, 11:00 PM	TEST (1)	TEST TEST	Announcement
Jan 4, 11:00 PM	TEST (1)	TEST TEST	Announcement
Jan 8, 2025, 11:00 PM	TEST odavno	TEST TEST	Announcement

At the bottom of the page, there is a pagination control with links for "Previous", "1", "2", and "Next >".

Image - Notification Page

8. HCI Principles

Usability: VolunMe is designed with simple and intuitive task flows for core actions such as joining and creating activities. The joining process requires minimal steps and provides immediate visual feedback, while activity creation follows a clear form structure with logical input fields. These streamlined flows reduce cognitive effort and support efficient task completion.

Create New Activity

Fill in all required fields. Your activity will be reviewed by admin before going live.

Form completion: 17% Fill all required fields

Important:
All activities are moderated. Once approved by an admin, they'll be visible to volunteers. Please provide clear and complete information.

Basic Information

Activity Title * Category

Activity title is required.

When & Where

Date * Time * Max Volunteers *

Location *

Activity Details

Description * 0/2000 characters

Describe what volunteers will be doing, what to bring, any requirements, and important details...

Description should include:
 • What volunteers will be doing
 • What to bring/wear
 • Any requirements or restrictions
 • Meeting point and contact information

Note: Fields marked with * are required. Please ensure all information is accurate before submitting.
 Please input all fields.

Image - Usability (1)

health

Planinarenje

Planinarski izlet od zvjezdanog sela do vrha planine. Ponijeti vodu i hranu.

Activity Details

📅 Date Tuesday, February 24, 2026	🕒 Time 00:00
📍 Location Mosor	
Open in Maps	
⭐ Capacity 30 spots available out of 30	
<small>Many spots available</small>	

30
Spots Available
0 already applied

👤

Ready to Volunteer?

Be the first to volunteer for this activity!

Apply to Volunteer

Activity Organizer

👤 **admin**
admin@volunme.com

About This Activity

Planinarski izlet od zvjezdanog sela do vrha planine. Ponijeti vodu i hranu.

This volunteer opportunity is open to anyone interested in making a positive impact.

Image - Usability (2)

Consistency: VolunMe maintains consistent layout patterns, navigation structure, typography, and button styles across all pages. The same header, navigation bar, and card-based layout are used throughout the application, allowing users to quickly recognize interface elements and predict system behavior. This consistency reduces cognitive load and improves learnability, as users do not need to relearn interface structures when navigating between sections.

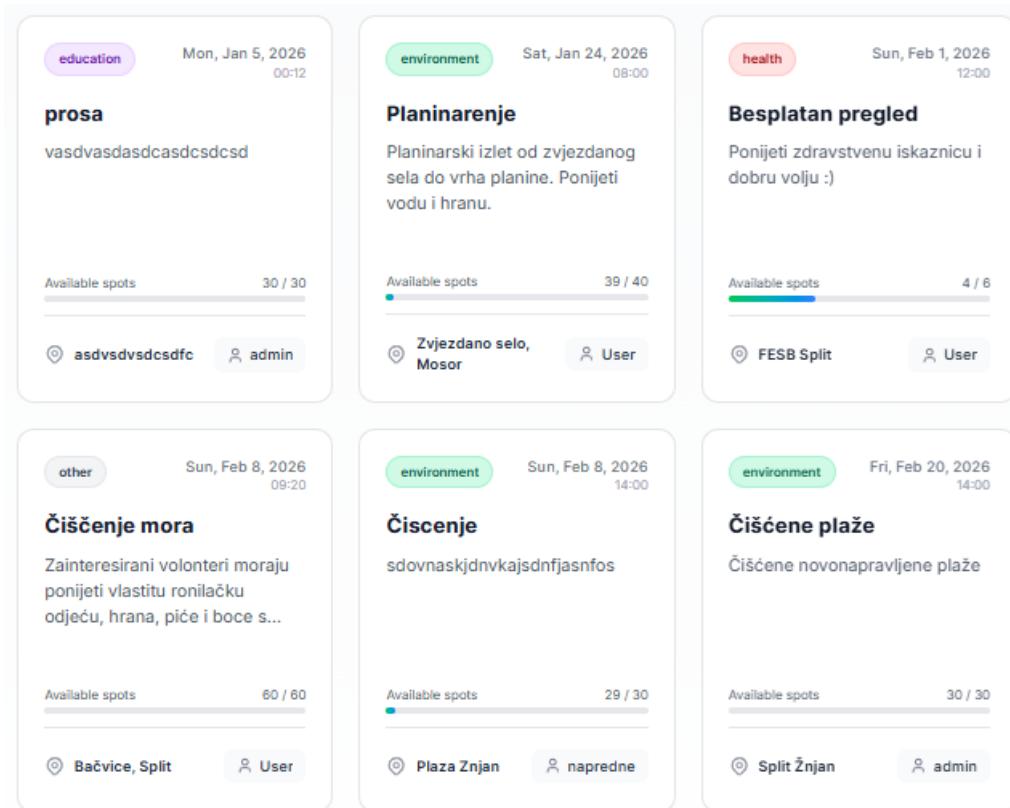


Image - Consistency (1)

Learnability: VolunMe is designed to be easily understandable for first-time users. The navigation structure follows familiar web application patterns, with clearly labeled sections such as Home, Activities, and Notifications.



Image - Learnability (1)



Image - Learnability (2)

Feedback: Application provides immediate system feedback through notifications and visible status updates.

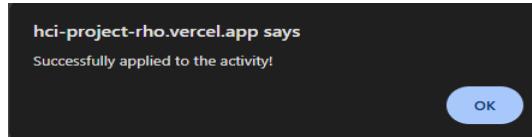


Image - Feedback (1)

Create New Activity X

Fill in all required fields. Your activity will be reviewed by admin before going live.

Form completion: 100% ✓ Ready to submit

Important:
All activities are moderated. Once approved by an admin, they'll be visible to volunteers. Please provide clear and complete information.

Basic Information

Activity Title * Category

Revijalna utakmica Sports

When & Where

Date * Time * Max Volunteers *

16/04/2026 09:30 100

Location *

Poljud, Split

Activity Details

Description * 54/2000 characters

Potrebni volonteri za podjelu majica za udrugu Leptir.

Description should include:
• What volunteers will be doing
• What to bring/wear
• Any requirements or restrictions
• Meeting point and contact information

Note: Fields marked with * are required. Please ensure all information is accurate before submitting.

Cancel Submit for Review

Image - Feedback (2)

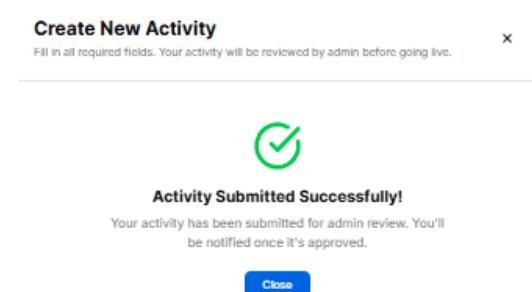


Image - Feedback (3)

Error Prevention: VolunMe incorporates mechanisms that prevent errors before they occur. All newly created activities require administrator approval before becoming publicly visible, reducing the risk of spam, inappropriate, or misleading content. Additionally, structured input fields and required form validation during activity creation help prevent incomplete or invalid submissions.

Sign In to Your Account

Enter your credentials below to access your volunteer dashboard

Before you begin:
Make sure you have your email and password ready. The system will verify your credentials before granting access.

Email Address
you@example.com

Password ! Please fill in this field.

Sign in

New to our community? [Create your account](#) →

Create New Activity

Fill in all required fields. Your activity will be reviewed by admin before going live.

Form completion: 17% Fill all required fields

Important:
All activities are moderated. Once approved by an admin, they'll be visible to volunteers. Please provide clear and complete information.

Basic Information

Activity Title * a Category Sports

Type must be at least 3 characters

When & Where

Date * dd/mm/yyyy Time * --::-- Max Volunteers * 30

Location * a

Please provide a valid location

Activity Details

Description * a 1/2000 characters

Please provide more details (min 20 characters)

Description should include:
• What volunteers will be doing
• What to bring/wear
• Any requirements or restrictions
• Meeting point and contact information

Note: Fields marked with * are required. Please ensure all information is accurate before submitting.
Please input all fields.

Cancel **Submit for Review**

Image - Error Prevention (1 & 2)

The screenshot shows the VolunMe Admin Dashboard. At the top, there is a navigation bar with links for Home, Activities, Notifications, and Admin. The Admin link is underlined, indicating it is the active page. On the right side of the header, there is a user profile icon labeled "admin" and a "Logout" button.

The main content area is titled "Admin Dashboard". Below it, there is a section titled "Pending Activities" with the sub-instruction "Review and approve user-submitted activities".

There are two activity cards listed:

- Activity 1:** Submitted Jan 12, 2026. Status: Sports, Pending Review. Title: pending. Description: fasdsdfasdfsdcasdcvasdv. Date: Wed, Jan 14, 2026. Time: 00:12. Location: vsfdvasdvasdv. Capacity: 30 volunteers. Organizer: admin, admin@volumne.com. Buttons: Approve (green) and Reject (red).
- Activity 2:** Submitted Jan 14, 2026. Status: Environment, Pending Review. Title: Akcija posumljavanja. Description: Ponijeti dobru volju, ostalo cemo mi osigurati. Date: Sat, Mar 14, 2026. Time: 08:30. Location: Park Šuma Marjan. Capacity: 150 volunteers. Organizer: Kristian Baja, kuki@gmail.com. Buttons: Approve (green) and Reject (red).

9. CRAP Principles

Contrast: is used to emphasize primary actions and clearly distinguish opposite or critical choices within the interface. In VolunMe, action buttons such as “Approve” and “Reject” in the Admin Panel are visually differentiated to prevent accidental errors. Similarly, “Login” and “Sign Up” are clearly separated to guide users through the onboarding process.

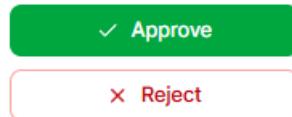


Image 8 Contrast (1)

Login Sign Up

Image - Contrast (2)

Repetition: Repetition is applied through consistent typography, spacing, button styles, and card layouts across all pages of VolunMe. The same activity card

structure (title, description, participant count, action button) appears throughout the application, creating familiarity and reducing cognitive load. Navigation elements and page headers follow identical layout patterns, allowing users to quickly recognize functional areas.

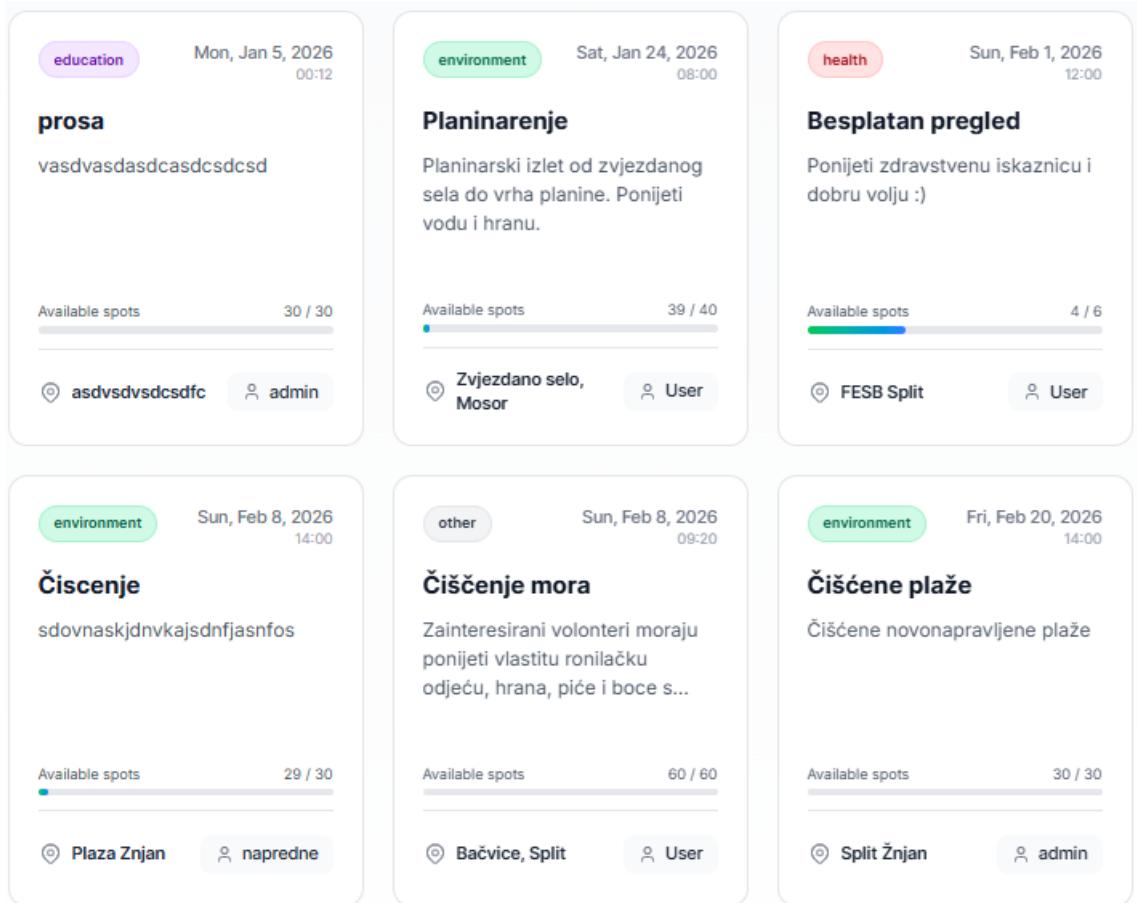


Image - Repetition (1)

Alignment: Content in VolunMe is structured using a consistent grid layout across all pages. Activity cards, navigation elements, and dashboard sections are aligned within clearly defined columns and spacing rules. This structured alignment improves readability and enables users to scan information efficiently.

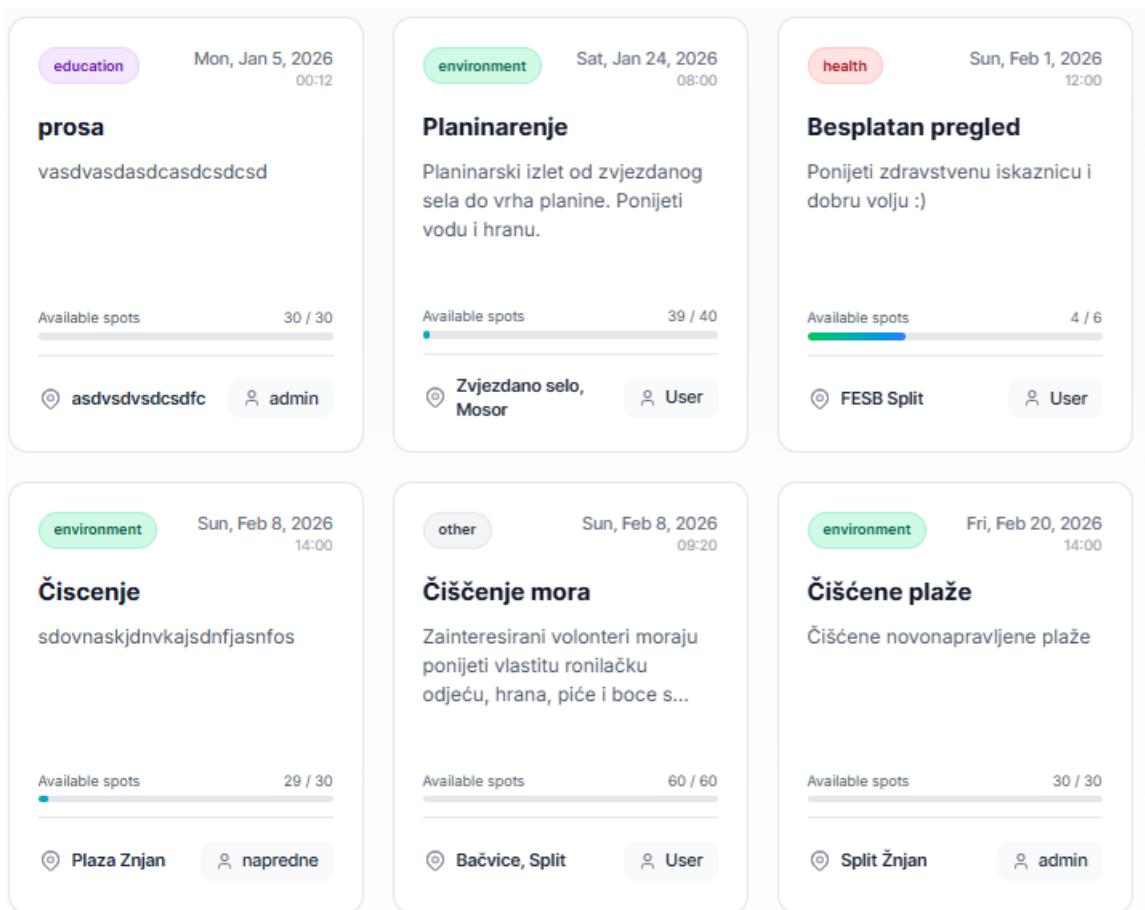


Image - Alignment (1)

Proximity: Related elements in VolunMe are grouped together to create logical visual relationships and reduce cognitive effort.

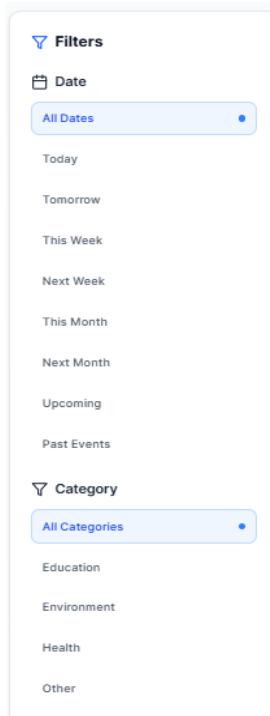


Image - Proximity (1)

10. Technologies Used

Technologies Used in This Project are:

Next.js – frontend framework for building the application

TypeScript – type-safe JavaScript for better code reliability

Tailwind CSS – utility-first CSS framework for responsive design

Vercel – hosting and deployment platform

Supabase – backend services, database, and authentication

Contentful CMS – content management system for static and dynamic content

11. Low-Level Theories

Hick-Hyman Law

VolunMe reduces perceived complexity by limiting the number of visible choices at once. The Activities page displays a clear list of events with optional filters (location and type), allowing users to narrow results instead of processing all information simultaneously. Default views remain simple and focused, helping users make decisions more quickly.

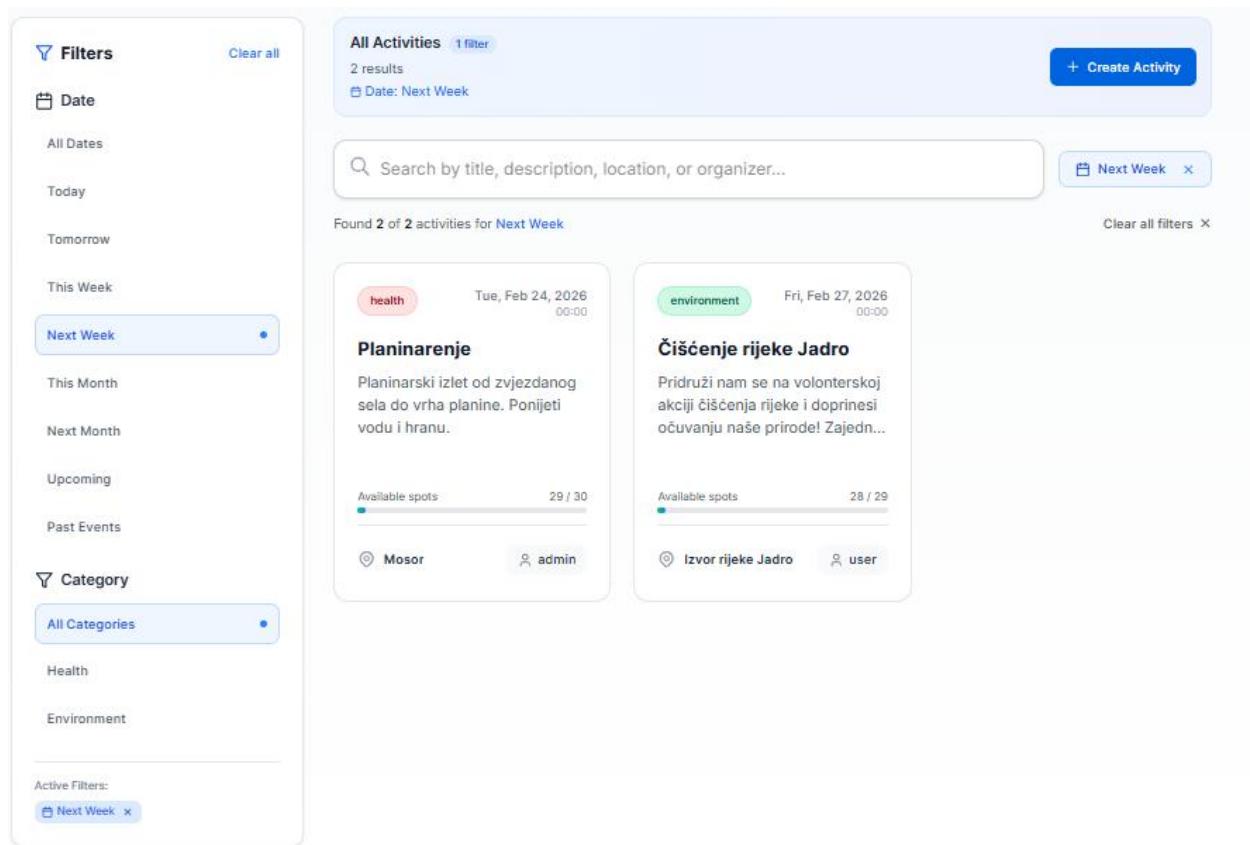


Image - Hick-Hyman Law

Fitts's Law

Primary actions such as “Join Activity” and “Create Activity” are visually prominent and sufficiently large for easy interaction. Action buttons are placed close to the related content, reducing cursor movement and enabling faster, more accurate selection.

Image - Fitts's Law

12. Database and Data Management

VolunMe uses Supabase as a backend solution for database management and user authentication. This relational structure ensures data consistency, scalability, and secure access control, while allowing future feature expansion such as ratings or gamification.

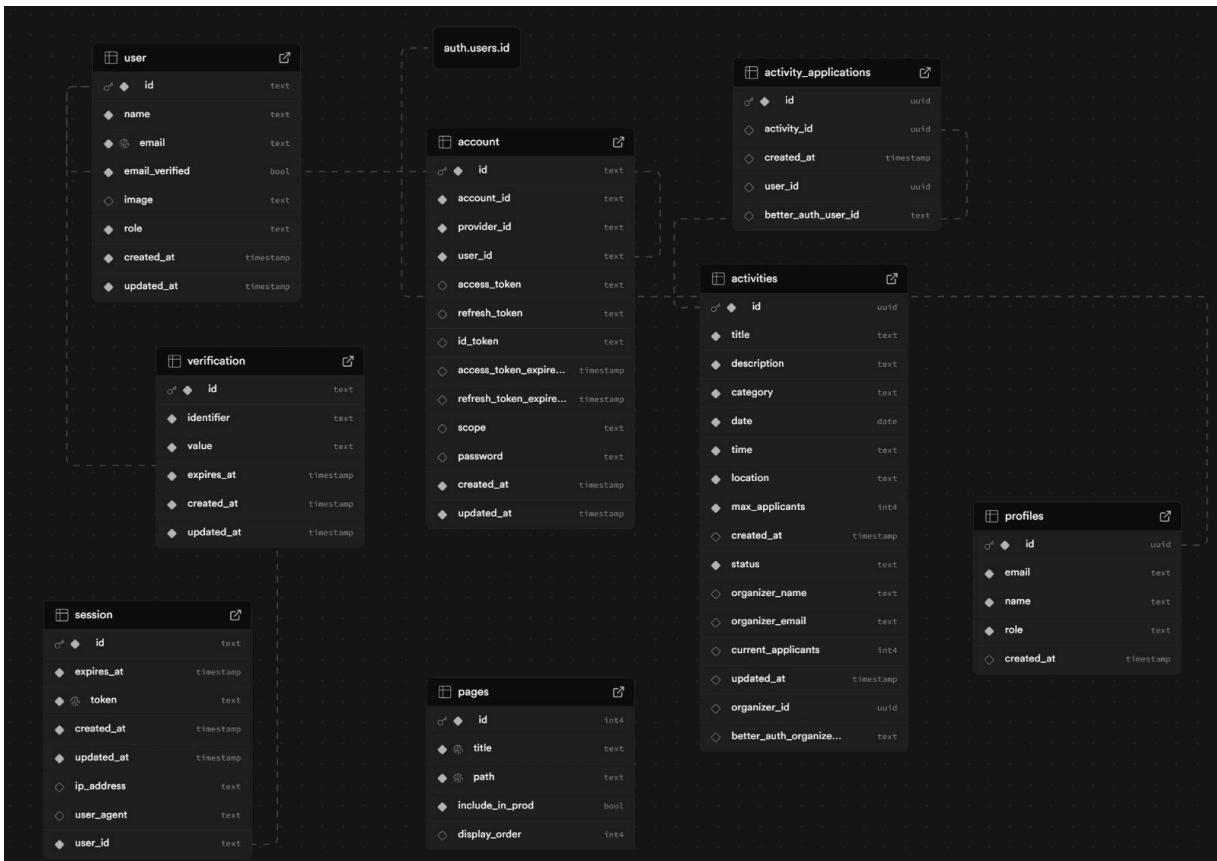


Image - ERD

NAME	DESCRIPTION	ROWS (ESTIMATED)	SIZE (ESTIMATED)	REALTIME ENABLED	
account	No description	9	48 kB	✓	13 columns [] []
activities	No description	18	96 kB	✓	16 columns [] []
activity_applications	No description	9	64 kB	✓	8 columns [] []
pages	No description	4	64 kB	✓	6 columns [] []
profiles	No description	18	32 kB	✓	6 columns [] []
session	No description	12	64 kB	✓	8 columns [] []
user	No description	9	48 kB	✓	8 columns [] []
verification	No description	0	24 kB	✓	6 columns [] []

Image - DataBase

13. Content Management System

Contentful CMS is used to manage notifications within the application, functioning as a digital notice board where important announcements and updates are published. This approach separates notification content from the application logic and enables administrators to easily create and update announcements without redeploying the application. The appearance and usage of the notification system are demonstrated in the figures below.

Content type		Notification	Type to search for entries	Filter		
		+ Created by me	+ Tags is one of	+ Taxonomy	+ Status is	+ Locale
Sort by						
<input type="checkbox"/>	Name	Content Type	Updated	Last updated by	Status	
<input type="checkbox"/>	TEST odavno	Notification	09 Jan 2026	 VolunMe webapp	Published	...
<input type="checkbox"/>	TEST	Notification	09 Jan 2026	 VolunMe webapp	Published	...
<input type="checkbox"/>	TEST (13)	Notification	09 Jan 2026	 VolunMe webapp	Published	...
<input type="checkbox"/>	TEST (12)	Notification	09 Jan 2026	 VolunMe webapp	Published	...
<input type="checkbox"/>	TEST (11)	Notification	09 Jan 2026	 VolunMe webapp	Published	...
<input type="checkbox"/>	TEST (10)	Notification	09 Jan 2026	 VolunMe webapp	Published	...
<input type="checkbox"/>	TEST (9)	Notification	09 Jan 2026	 VolunMe webapp	Published	...
<input type="checkbox"/>	TEST (8)	Notification	09 Jan 2026	 VolunMe webapp	Published	...
<input type="checkbox"/>	TEST (7)	Notification	09 Jan 2026	 VolunMe webapp	Published	...
<input type="checkbox"/>	TEST (6)	Notification	09 Jan 2026	 VolunMe webapp	Published	...
<input type="checkbox"/>	TEST (5)	Notification	09 Jan 2026	 VolunMe webapp	Published	...
<input type="checkbox"/>	TEST (4)	Notification	09 Jan 2026	 VolunMe webapp	Published	...
<input type="checkbox"/>	TEST (3)	Notification	09 Jan 2026	 VolunMe webapp	Published	...
<input type="checkbox"/>	TEST (2)	Notification	09 Jan 2026	 VolunMe webapp	Published	...
<input type="checkbox"/>	TEST (1)	Notification	09 Jan 2026	 VolunMe webapp	Published	...
<input type="checkbox"/>	TEST (1)	Notification	09 Jan 2026	 VolunMe webapp	Published	...

16 entries < Previous Next >

Image - CMS

Fields				
	Name	Field Type	Localization	
⋮	title Entry title	T Short text	—	Edit ⋮
⋮	message	T Long text	—	Edit ⋮
⋮	type	T Short text	—	Edit ⋮
⋮	user	⊕ Reference	—	Edit ⋮
⋮	activity	⊕ Reference	—	Edit ⋮
⋮	targetUsers	⊕ References, many	—	Edit ⋮
⋮	timeStamp	🕒 Date & time	—	Edit ⋮
⋮	createdAt	🕒 Date & time	—	Edit ⋮

Image - CMS Notification

14. Performance and Optimization

Performance testing was conducted using Google PageSpeed Insights, and the results were excellent for both mobile and desktop versions. The application demonstrates fast loading times, smooth interactions, and overall high performance, as illustrated in the figures below.

Report from 18 Feb 2026, 22:10:40

<https://hci-project-rho.vercel.app/>

Analyse

Mobile Desktop

Discover what your real users are experiencing

No data

Diagnose performance issues



92

Performance

Values are estimated and may vary. The [performance score](#) is calculated directly from these metrics. See calculator.

▲ 0–49 ■ 50–89 ● 90–100



METRICS

[Expand view](#)

● First Contentful Paint

1.4 s

■ Largest Contentful Paint

2.9 s

● Total Blocking Time

20 ms

● Cumulative Layout Shift

0

■ Speed Index

4.3 s

Captured at 18 Feb 2026, 22:10 CET

Emulated Moto G Power with Lighthouse 3.0.1

Single-page session

Initial page load

Slow 4G throttling

Using HeadlessChromium 144.0.7558.132 with Ir

View Treemap



Show audits relevant to: [All](#) [FCP](#) [LCP](#) [TBT](#)

Image - Mobile Performance Test

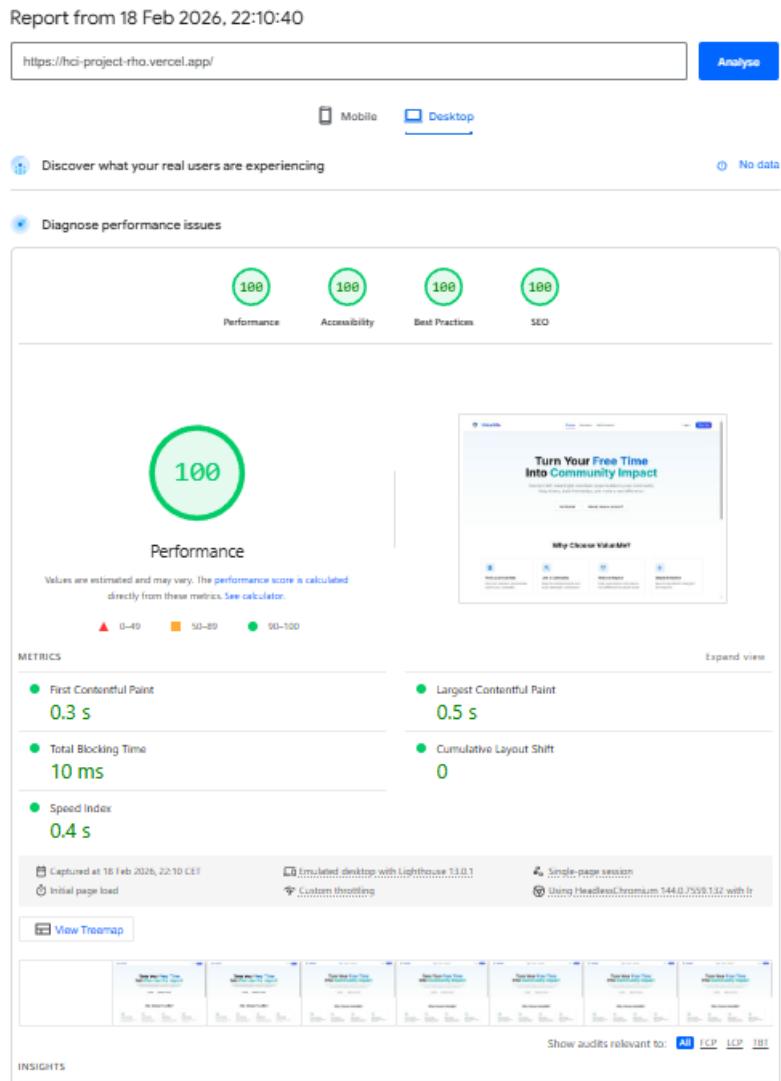


Image - Desktop Performance Test

15. Future Improvements

Future improvements include user ratings for events, gamification features such as badges, enhanced accessibility options, and personalization based on user preferences.

16. Conclusion

VolunMe demonstrates how Human–Computer Interaction principles can be applied to create a meaningful and socially impactful digital product. The application successfully connects volunteers with organizations, strengthens community engagement, and provides an intuitive user experience. In its current form, VolunMe fulfills its core mission of turning free time into meaningful action.