

VOLUNTEER APPLICATION OF MS GRADUATES IN COMPUTER SCIENCE

CSE 5335-001- WEB DATA MANAGEMENT

Instructor: Elizabeth Diaz

Report: Understanding of the Volunteer Application

Group 3 Team Members

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Development Timeline

Phase 1: (Week 1) Initial Setup and Planning

Configure the environment for development.

Give the database schema a definition.

Set up specific assignments for every team member.

Phase 2: (Weeks 2–5) Frontend and Backend Development

Each member works on a different component. To guarantee cooperation and alignment, hold regular meetings.

Phase 3: (Weeks 5–6) Integration and Testing

Combine distinct elements to create a seamless application.

Test the application in its entirety thoroughly.

Phase 4: (Week 7) Monitoring and Deployment

Install the program on a server that is appropriate.

Put in place application performance and usage monitoring.

Phase 5: (Week 8) Documentation and Final Adjustments

Adapt as needed in light of user and/or instructor feedback.

Keep a record of the application for upkeep in the future.

1. Project Overview

The volunteer application addresses the employment challenges faced by the graduates recently due to the current economic uncertainties. With job opportunities becoming scarce post-graduation, the government's response has been the initiation of this comprehensive volunteer program across various departments. This program requires the active involvement of professors who assume a supervisory role, overseeing volunteers and reporting to both departmental & immigration authorities based on their Performance.

The primary goal of this application is to simplify & enrich the volunteer process. It tries to establish a platform wherein graduates can explore diverse volunteer opportunities & meaningfully contribute to projects under the proper guidance of allotted professors. This report provides a thorough exploration of the application's overarching objectives & features. Spearheaded by professors, this program ensures a symbiotic relationship between academia & real-world application, with performance oversight & reporting mechanisms enhancing accountability.

The active involvement of professors in a supervisory capacity ensures that the volunteer experience is guided by mentorship, fostering a symbiotic relationship between experienced educators & enthusiastic graduates. Diving deeper into the application's objectives, it seeks to bridge the gap between academia & practical experience. By providing a centralized platform for task assignment, progress tracking & communication, the application ensures a well-coordinated volunteer ecosystem.

This platform is designed with inclusivity in mind where it serves as a pivotal bridge between academic achievement & professional employment. To further enhance its capabilities with advanced AI detectors have been seamlessly integrated into the development process.

An innovative dimension of this volunteer application is the incorporation of advanced AI detectors which helps us

- To monitor the development process rigorously
- To enhance the overall functionality of the application.

The AI detectors play a crucial role in ensuring the authenticity & integrity of the information stored within the platform. This not only safeguards against potential misuse but also contributes to the creation of a trustworthy & secure environment for graduates, professors & universities.

2. High-Level Requirements

2.1 User Registration and Authentication

The main aspects of the application are user registration, user authentication and authorization to different modules based on their Roles & Permissions. Graduates should do their registration (create an account) using their respective university email addresses. This registration acts not only as a means of identification but also helps the graduate in transitioning from academic to professional career.

The registration process incorporates a strict email verification. This additional verification step adds a layer of security & authenticity ensuring that only registered users can be confidently validated & communicated. This also acts as a safeguard mechanism in mitigating the risk of unauthorized access to the application.

Further to the registration, users are granted access to the application through a login functionality. This operates with the authenticated credentials acquired during the registration & email verification. By integrating the such authentication approach, the application prioritizes security for user interactions & actions.

2.2 Dashboards for Graduates and Professors

After the authentication process, graduates are redirected into a personalized & feature-rich dashboard tailored to offer a holistic view of their progress. This graduate-centric dashboard becomes a focal point, presenting essential features designed to enhance their engagement with the platform and the professors. Some main functionalities include an interactive calendar, which is designed to showcase tasks start dates and their respective deadlines which helps in facilitating efficient time management. Graduates can also seamlessly submit weekly reports through the dashboard by justifying their 21 Hours of Work per week, ensuring a streamlined & user-friendly experience.

Concurrently, Professors are also equipped with their dedicated dashboards manage unique roles and functions within the volunteer program. Professors can effortlessly assign tasks to graduates, review submitted reports & provide them with their constructive feedback. This centralized hub for professors becomes helpful in effective communication & meticulous task management, enhancing the overall efficiency of their supervisory responsibilities.

These user role based dashboards serve as a central hub within the volunteer application, catering to the distinct needs of both graduates & professors. For graduates, the

dashboard becomes a dynamic space for tracking progress, managing tasks & ensuring timely submissions. Simultaneously, professors leverage their dashboards to orchestrate task assignments, monitor student performance & actively contribute to the feedback loop. The integration of these personalized dashboards stands as a testament to the application's commitment to providing a user-centric & collaborative environment for both volunteers & supervisors.

2.3 Task Management

Task Management is a critical module in this volunteer application, playing a central role in facilitating a structured & organized approach to volunteer activities and performance. This feature is designed to help graduates with a comprehensive toolset, enabling them to seamlessly navigate & manage their assigned tasks throughout the volunteer program. Graduates upon accessing the application can view a dedicated module related to task management. Within this interface (module), they get insights of their assigned tasks, with detailed information along with task titles, descriptions, deadlines & prioritization levels. This helps graduates to grasp the intricacies of each task, fostering a clear understanding of their responsibilities.

A key factor of this is the capability for graduates to actively engage with their assigned tasks & their deadlines. This includes the functionality to mark their tasks as complete by providing a real-time update on their progress to their respective professor. This feature ensures that graduates can efficiently communicate the status of their tasks through this real-time workflow in facilitating effective collaboration within the volunteer program.

By integrating such robust functionalities, this application not only increases the efficiency of volunteer activities, but also ensures a transparent & organized workflow. This impact on structured task management aligns with the overarching goal of providing graduates with the tools they need to navigate through their volunteer responsibilities seamlessly. Ultimately, this feature stands as a critical aspect in making a positive & productive volunteer experience.

2.4 Weekly Reports and AI Anti-Cheating Mechanism

The weekly reporting module is mandatory for the graduates to provide detailed reports which should contain proper accountability of their weekly progress on the tasks assigned to them. These reports act as a vital factor in measuring their performance, which justifies their dedicated 21 hours of work. They should also attach relevant supporting

documents justifying their work. This process aims to provide an overview of each volunteer's contributions & progress within the program.

To maintain the integrity of this reporting module, an innovative AI anti-cheating mechanism should be strategically integrated into the application which leverages advanced AI detectors, to proactively measure & prevent any potential fraudulent activities during this process. The main goal is to ensure the authenticity & transparency of the submitted reports, creating a secure environment that accounts for the credibility of the entire reporting framework.

The AI anti-cheating mechanism operates by integrating experienced detectors which are capable of analysing the submitted reports for any signs of similarities. This also includes a thorough examination of the content to identify patterns associated with AI-generated or Plagiarized material. By doing so, this acts as a safeguard layer against dishonest practices maintaining the proper integrity of the reporting module & encouraging a culture of accountability among volunteers.

In particular, the integration of the AI anti-cheating mechanism is a strategic initiative to maintain the highest standards of honesty & authenticity within the application. By using such advanced AI detectors, the system not only identifies potential cheating instances but also helps in pressurising the importance of genuine & accountable reporting. This innovative addition helps in the commitment of developing a trustworthy & reliable platform for both graduates & the supervisory team.

2.5 Chat Feature

The Chat Feature is critical aspect in terms of communication channel in the application which should be implemented in NodeJS. It adds a dynamic layer within the platform for real-time communication. This feature helps in facilitating seamless interactions among volunteers & professors promoting effective communication between them.

The implementation of this chat feature is designed to foster a sense of community & collaboration within the application. Volunteers can engage in real-time conversations with their peers, creating an environment to share ideas, seeking assistance & building a supportive network. This peer-to-peer communication module helps in contributing to the vibrancy of the volunteer community enhancing the overall experience for individuals participating in the program.

This ensures that there is a specific dedicated channel for volunteers to seek constant guidance, clarification or feedback from their assigned professors. The real-time nature of the communication adds an element of immediacy, timely and effective collaboration between volunteers & supervisors.

In particular, the creation of the chat application in NodeJS is an enhancement aimed at promoting collaboration & coordination within the application. This also reinforces the collaborative spirit that underpins the success of the entire volunteer program.

3. PROTOTYPE

Home Page

Logo

HomeAboutContactLogin/Sign Up

Volunteer Application

Apply now to become a volunteer and make a difference in your community.

About

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nulla vitae elit libero, a pharetra augue. Sed non mauris vitae erat consequat auctor eu in elit.

How to Apply

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Apply Now

Testimonial

"Volunteering with this program has been an amazing experience. I have learned so much and made lifelong friends."

- John Doe, Volunteer

Benefits of Volunteering

- Gain valuable experience
- Make a difference in your community
- Build your network
- Enhance your skills

Department 1

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View Details

Department 2

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View Details

Department 3

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View Details

Volunteer Performance

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Evaluation Process

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Logo

Dashboard

User ▼

Volunteer

Application for MS

Graduates in CS

Join our volunteer program and gain valuable experience while helping the community

Application Form

Full Name

Education

Email

Skills

Phone Number

Availability

Address

Preferred Department

Country of Origin

Resume/CV

Choose file

Current Status

Submit

Departments

Department 1

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nulla nec purus feugiat, olestie ipsum et, consequat nibh.

Apply Now

Department 2

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Department 3

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Apply Now

Testimonials

"Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nulla nec purus feugiat, olestie ipsum et, consequat nibh."

"Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nulla nec purus feugiat, olestie ipsum et, consequat nibh."

"Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nulla nec purus feugiat, olestie ipsum et, consequat nibh."

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Registration Page

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Registration

Please verify your email address. An email has been sent to your registered email address.

Full Name

University Email

Password

Confirm Password




☐ I agree to the terms and conditions

Register

Email Verification

Please verify your email address. An email has been sent to your registered email address.

X



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Login

University Email

Password




Forgot Password?

Login

Forgot Password

Enter your registered email address to reset your password. An email will be sent to your email address with a link to reset your password.

X



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Tasks

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Dashboard

User

Tasks

Task 1

Task description goes here.
Deadline: 01/01/2023

Priority: High

☐ Mark as Complete

Task 3

Task description goes here.
Deadline: 01/03/2023

Priority: Low

☐ Mark as Complete

Task 2

Task description goes here.
Deadline: 01/02/2023

Priority: Medium

☐ Mark as Complete

Task 4

Task description goes here.
Deadline: 01/04/2023

Priority: High

☐ Mark as Complete

Submit Weekly Report

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Weekly Report

[Logo](#)

Dashboard

User

Task List

Start Date

Task Deadlines

☐ Task 1

01-02-2024

View Details

☐ Task 2

Yet to be Started

View Details

☐ Task 3

Yet to be Started

View Details

Weekly Report

Report

Attach File(s)

Submit

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Task Management

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Task Management

Search

Filter

Task Name	Assigned To	Deadline	Priority	Status
Task 1	Graduate 1	2022-01-01	High	<div>In Progress</div>
Task 2	Graduate 2	2022-01-02	Medium	<div>In Progress</div>

Weekly Reports & AI Anti-Cheating Mechanism

Summary of Work

Justification of 21 Hours of Work

Attachments

Choose file




Submit Report

Feedback

Search

Filter

Graduate Name	Week	Summary	Justification	Feedback
Graduate 1	Week 1	Summary 1	Justification 1	<div>Provide Feedback</div>
Graduate 2	Week 2	Summary 2	Justification 2	<div>Provide Feedback</div>



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Message

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3. CONCLUSION:

This report has presented a comprehensive overview of the various roles that are necessary for the project. The entire project, including the system's scope, entities, relationships, and design considerations, has been visualized and represented. The Entity Relationship diagram provides a clear visualization of the database schema, which will be the basis for the website development.