

INDIANATECH

Course – Capstone Project

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Project – Campus Connect

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Project Proposal and Problem Identification:

Many college campuses fall short in connecting students to campus events, groups, services, and other opportunities for involvement. This disconnects participant poor event attendance, a waste of resources, and missed opportunities to connect students with peers and campus life. Current methods engaged to carry out this effort include bulletin boards, email notifications, and isolated social media posts. These are decentralized and fragmented; therefore, it's hard for students and campus staff to stay updated and engaged.

Solution Proposed:

Here comes the Campus Connect, our vision is to deliver all on-campus activities, events, and resources under one single, easily-accessible digital platform. In this case, this solution will enable students to view events, RSVP, get notified, and interact with campus groups-all within one simplified web-app. With this, Campus Connect will lighten the job of campus personnel through providing methods of organizing events, tracking attendance of students, and managing logistics of events that would further lead to a more connected school community.

Software and Hardware Requirements

Requirement Type	Details
Operating System	<ul style="list-style-type: none">- Server-Side: Windows Server 2019 or later / Linux (Ubuntu 20.04 or later)- Client-Side: Windows 10 or later / macOS 10.15 (Catalina) or later / Linux (any modern distribution) / Android 6.0 (Marshmallow) or later / iOS 12 or later

Processor	<ul style="list-style-type: none"> - Server: Quad-core Intel Xeon or equivalent AMD processor (minimum 2.0 GHz) - Client: Dual-core processor (minimum 1.5 GHz) or equivalent
RAM	<ul style="list-style-type: none"> - Server: Minimum 16 GB; recommended 32 GB for optimal performance - Client: Minimum 4 GB; recommended 8 GB for enhanced multitasking
Storage	<ul style="list-style-type: none"> - Server: Minimum 500 GB SSD for database and application storage - Client: Minimum 10 GB of free disk space for application and data storage
Web Browser	- Latest versions of Chrome, Firefox, Safari, or Edge. Users should ensure that their browsers support HTML5 and CSS3 for optimal performance of the web application.

Existing and Proposed System

Feature	Existing App	Our App (Campus Connect)
File Sharing	Limited file upload or downloads capabilities	Comprehensive file sharing with organized access
Discussion Forum	Basic comment sections on certain pages	Full-featured discussion forum for questions and replies
User Directory	Simple contact list	Searchable directory with detailed faculty and staff information

Learning Pathways	No personalized learning options	Customizable learning pathways based on interests
Skill Development	Occasional workshops and training	Integrated hub for workshops, webinars, and courses
Real-Time Updates	Static updates, often outdated	Live updates on events, weather, and emergencies
Virtual Study Groups	No collaboration features	Dedicated platform for creating and joining study groups
Gamification	No incentives for engagement	Gamification elements like rewards and badges for participation
Resource Marketplace	No marketplace functionality	Platform for buying, selling, or trading textbooks and supplies
Alumni Networking	No dedicated alumni engagement features	Networking opportunities between current students and alumni

Key Features of Campus Connect:

1. **User Authentication:** Role-based access controls user permissions, hence guaranteeing security and personalized experiences in different user roles.
2. **Home Page:** Centralized dashboard for easy access to announcements, file sharing, forums, and user directory.
3. **Announcements Page:** Administrators can create, edit, and delete announcements to keep the campus updated on current affairs.
4. **File Sharing Page:** Users can upload, view, and download files to further assist in collaboration and access to necessary resources.

5. **Discussion Forum Page:** Discussion-based community engagement, posting questions, and responding stimulates academic interaction and learning collaboratively.
6. **Personalized Learning Pathways:** Students create customized learning plans comprising course recommendations and resources aligned to goals.
7. **Integrated Skill Development Hub:** Access to workshops, webinars, and courses enhances skills, keeping users engaged and career-ready.
8. **Real-Time Campus Updates:** Live notifications on events, weather, and emergencies keep the user updated about the urgent changes on campus.
9. **Virtual Study Groups:** Join or create study groups for collaborative learning, tutoring, and resource sharing.
10. **Gamification Elements:** Badges and rewards integrated into the system help in increasing engagement as it motivates users to participate actively in activities.
11. **Integrated Feedback System:** Anonymous feedback will allow students to share their valuable insights and continuously improve campus courses and services.
12. **Resource Marketplace:** Students can buy, sell, or trade resources on the marketplace, thereby fostering sustainability and academic sharing.
13. **Alumni Network:** Connects the students with alumni that enhances mentorship, internship, and job opportunities.
14. **Security and Privacy:** Users' data is encrypted and secured with robust authentication protocols. It keeps sensitive information secure.
15. **User Experience (UX) Design:** Web design and intuitive interface with responsiveness ensure easy access to features on any device.

Tech Stack:

Frontend

- **Framework:** React for responsive web design.
- **UI Library:** Material-UI or Tailwind CSS for consistent styling.
- **State Management:** Redux or Context API for handling application state.

Backend

- **Server:** Node.js with Express for a scalable backend.
- **Programming Language:** JAVA Programming.
- **Authentication:** Google Auth for secure login.
- **Real-Time Updates:** Socket.io for live event updates.

Database

- **Primary Database:** MongoDB for storing user profiles and event data.

Gantt Chart:

