IPS Academy, Indore Institute of Engineering and Science

(A UGC Autonomous Institute)
Department of Computer Science & Engineering-AIML

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A Major Project Synopsis

"Campus Circle "

For the partial fulfillment for the award of the Bachelor of Technology (CSEAIML) Degree by Rajiv Gandhi Proudyogiki Vishwavidhyalaya, Bhopal.

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Project Introduction

In the rapidly evolving academic and professional landscape, effective networking and collaboration within educational institutions have become essential for holistic development. However, existing social and professional networking platforms are often too broad or informal for the specific needs of students, alumni, and faculty members within a college environment.

Campus Circle is a dedicated web application designed to bridge this gap by offering a secure, role-based networking platform tailored to academic ecosystems. The system empowers students to connect with verified alumni for mentorship, enables faculty to engage with learners professionally, and facilitates opportunities for career development and institutional growth.

Built using Django — a high-level Python web framework — Campus Circle offers features such as role-specific login, profile management, a social feed, messaging, job and internship boards, event management, and more. It ensures data privacy, secure file uploads, and role verification processes, especially for alumni, thereby creating a robust platform that mirrors the essence of LinkedIn, but optimized for the needs of a college community.

This project aims to enhance student-alumni-teacher interaction, promote professional growth, and create a digital space that strengthens institutional networks beyond the classroom

Problem Domain

In most academic institutions, the communication and networking gap between students, alumni, and faculty remains largely unaddressed by existing digital platforms. General-purpose social media and professional networks such as LinkedIn are designed for global audiences and do not provide institution-specific features or role-based access control tailored to the needs of a college ecosystem.

Students often lack access to mentorship, professional guidance, and real-time updates from alumni who have transitioned into the workforce. Similarly, teachers have limited digital tools to track their students' professional growth or promote academic collaboration outside the classroom. Alumni, on the other hand, face difficulties contributing to their alma mater's ecosystem due to the absence of a centralized and verified network.

Additionally, critical functionalities such as job opportunity sharing, academic event promotion, or targeted communication between roles (e.g., student-to-alumni, teacher-to-student) are either missing or fragmented across platforms.

This lack of a unified, secure, and role-specific digital space creates barriers to collaboration, knowledge exchange, and career development — key components of modern education. Hence, there is a strong need for a centralized, college-oriented platform that enables structured, secure, and professional interaction within the academic community.

Solution Domain

To address the communication and networking challenges within the academic environment, **Campus Circle** is proposed as a comprehensive, role-based professional networking platform specifically designed for colleges and universities. This Django-powered web application provides a secure, interactive space where students, alumni, faculty, and administrators can engage meaningfully to support academic growth, mentorship, and career development.

The system supports multiple verified user roles — **Student, Alumni, Teacher, and Admin** — each with customized access privileges. Upon registration, users create detailed profiles, upload resumes, list skills, and share achievements. Alumni verification is handled by administrators to ensure credibility and trust within the network.

Key features of the platform include:

- A **social feed** where users can post updates, share achievements, or promote academic content.
- A **messaging system** that allows users to communicate privately across roles.
- **Job and internship boards** where alumni and teachers can post verified opportunities for students.
- **Event management** functionality for sharing academic or career events.
- **Search and filtering tools** for discovering users, jobs, or events based on roles, skills, or keywords.

Security and data integrity are central to the system. Role-based permissions, CSRF protection, secure file handling, and user data privacy are enforced through Django's built-in mechanisms and custom logic.

By offering a LinkedIn-like experience tailored for academic ecosystems, **Campus Circle** not only enhances communication and engagement within institutions but also builds a lasting professional bridge between students, alumni, and faculty.

Requirement Specification

1. Hardware Requirements

Component	Minimum Requirement	Recommended Requirement
Processor	Dual-Core Processor	Quad-Core Processor
RAM	8 GB	16 GB
	50 GB (HDD or SSD)	100+ GB SSD
Display	HD (1366×768 resolution)	Full HD (1920×1080 resolution)
Internet	Required for development & testing	Stable broadband or Wi-Fi connection
Operating System	Windows / Linux / macOS	Any OS compatible with Python/Django

2. Software Requirements

Category	Specification
Backend	Python 3.13, Django 5.2
Frontend	HTML5, CSS3, Bootstrap, JavaScript
Database	SQLite (Development), PostgreSQL (Production)
Authentication	Django Authentication System
Libraries/Tools	Pillow (Image Handling), Django REST Framework (Optional), Django Messages
File Storage	Django FileField (local), Cloudinary (for hosting media)
IDEs	Visual Studio Code, PyCharm
Version Control	Git & GitHub
Browser	Chrome / Firefox / Edge

Expected Outcome

The outcome of this project will be a fully functional, secure, and scalable web application — **Campus Circle** — specifically designed for college students, alumni, teachers, and administrators to network and collaborate professionally within a controlled academic environment.

Upon successful implementation, the system will:

- Enable **role-based access** for Students, Alumni, Teachers, and Admins.
- Provide each user with a **customized profile** to showcase their skills, education, resume, and experience.
- Allow users to **create and interact** with posts in a social feed, similar to LinkedIn.
- Facilitate **one-to-one messaging** between verified users for mentorship, collaboration, and communication.
- Offer a **Job & Internship Board** where alumni and admins can post opportunities, and students can apply.
- Support **event creation and registration** for academic, cultural, or professional programs.
- Include an **admin dashboard** to manage users, posts, alumni verification, and platform moderation.
- Ensure **secure file handling** (PDF resumes, images), CSRF protection, and proper access control.
- Be responsive across devices and browsers, with a **Bootstrap-based user interface**.

Ultimately, Campus Circle will serve as a practical and modern digital platform that improves engagement, knowledge sharing, and career development in a college environment — fulfilling both technical and social needs within an educational ecosystem.

References

- Django Documentation – https://docs.djangoproject.com/

- Python Official Documentation – https://docs.python.org/

- PostgreSQL Documentation – https://www.postgresql.org/docs/

- Django REST Framework – https://www.django-rest-framework.org/

- Bootstrap Official Site – https://getbootstrap.com/

- Cloudinary Documentation – https://cloudinary.com/documentation

- GitHub – https://github.com/

- W3Schools HTML/CSS/JS Tutorials – https://www.w3schools.com/

- Mozilla Developer Network (MDN) – https://developer.mozilla.org/

- GeeksforGeeks Django Tutorials – https://www.geeksforgeeks.org/django-tutorial/

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