Google Developer Group
On Campus

TechSprint

Leveraging the power of AI

Team Details

a. Team name: ERROR 404
b. Team leader name: SANJAY SUNIL
c. Problem Statement: Open Innovation

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Brief about your solution and problem statement addressing

Students face daily challenges in managing campus information such as class schedules, assignments, exams, events, and responsibilities. This information is scattered across WhatsApp groups, PDFs, notice boards, and verbal updates, making it difficult to find accurate, personalized, and timely details. As a result, students miss deadlines, feel overwhelmed, and struggle to prioritize what matters each day—especially freshers.

Campus Companion addresses this problem by acting as a centralized, AI-powered student hub. It provides a personalized dashboard that displays relevant classes, deadlines, duties, and events based on a student's branch, batch, section, and interests. Using Gemini AI, students can ask natural language questions and receive accurate, context-aware answers backed by real campus data. The platform also enables admins and clubs to manage announcements, assignments, and events efficiently, ensuring reliable and up-to-date information for everyone.

How Is Campus Companion Different?

Most existing solutions rely on **static portals, WhatsApp groups, or generic chatbots** that are either outdated, unverified, or not personalized. Campus Companion is different because it is a **college-specific, AI-powered system** that uses **verified, real-time campus data** instead of assumptions or public internet content.

Key differentiators:

- **Personalization by default** – content is filtered automatically based on branch, batch, section, and interests
- **Context-aware AI (Gemini)** – answers are generated using actual campus data, not generic responses
- **Threaded Q&A with feedback** – questions remain saved with follow-ups, pinned answers, and learning feedback
- **Role-based access** – students, CRs, clubs, and admins have controlled permissions, ensuring trusted information
- **No separate backend** – secure, scalable architecture using Firebase rules

Personalized Student Dashboard
Displays today’s classes, upcoming deadlines, events, and duties based on branch, batch, section, and interests.

AI-Powered Campus Q&A (Gemini)
Natural language queries for timetables, exams, assignments, events, and campus rules with accurate, context-aware answers.

Unified Search System
Single search bar supporting keyword search and AI-based queries across all campus data.

Threaded Query System
Persistent question threads with follow-ups, pinned answers, solved status, and saved responses.

Assignments & Deadlines Manager
Branch-wise and subject-wise assignment tracking with reminders and status updates.

Clubs & Events Hub
Event discovery, registration, capacity tracking, comments, and announcements from clubs and admins.

Duties & Responsibilities Tracker
Task management for volunteers, CR duties, lab work, and group assignments.

Role-Based Access Control
Separate permissions for students, club admins, CRs, and administrators using secure Firebase rules.

AI-Assisted Content Creation

Google Technologies Used

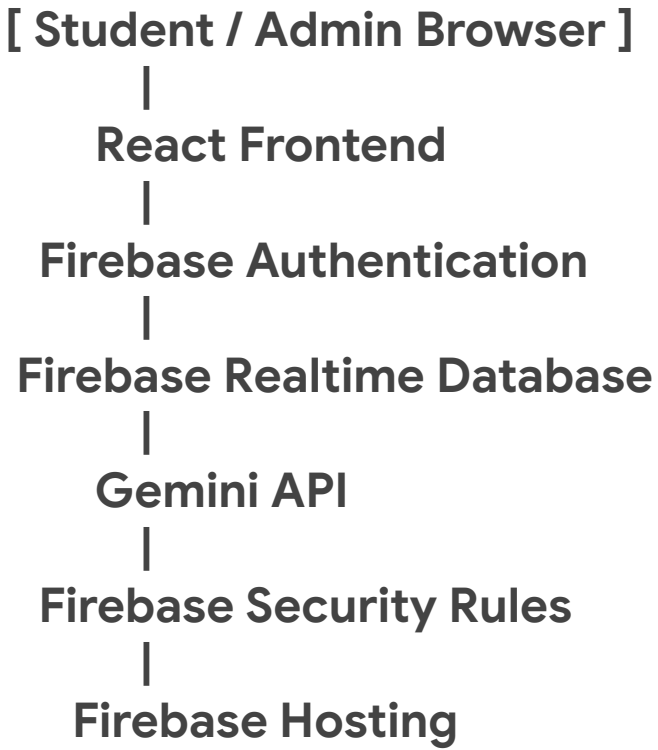
- **Gemini API (Google AI)**
  Powers natural language campus Q&A, follow-up conversations, summarization, and AI-assisted content creation.

- **Firebase Authentication**
  Secure user login using email/password and Google Sign-In.

- **Firebase Realtime Database**
  Stores and syncs campus data such as timetables, assignments, events, user profiles, and query threads in real time.

- **Firebase Security Rules**
  Enforces role-based access control for students, club admins, CRs, and administrators without a custom backend.

- **Firebase Hosting**
  Deploys the single-page React application with fast, secure global delivery.


[Student / Admin Browser]
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React Frontend
|
Firebase Authentication
|
Firebase Realtime Database
|
Gemini API
|
Firebase Security Rules
|
Firebase Hosting

Snapshots of the MVP

1. Login & Onboarding Screen

- Firebase Authentication with Email/Password and Google Sign-In
- User profile setup: Branch, Batch, Section, Interests
- Personalized data loading after login

2. Personalized Student Dashboard

- Today’s classes with time and room number
- Upcoming assignments and deadlines
- Events and duties relevant to the student
- Clean card-based UI for quick understanding

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GITHUB : https://github.com/Sanjay-Sunil/CampusIQ

MVP : https://campusiq.vercel.app/

DEMO VIDEO :
https://drive.google.com/file/d/1zUc_5pYsnqsXz5TGywLBxJcQhO_sxNo_/view?usp=sharing

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DEMO VIDEO

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Thank you!