

Project Brief: CampusCollab – AI-Powered Student Project Manager

Overview

CampusCollab is a web platform that helps university students collaborate on group projects more efficiently.

The goal is to automatically extract project requirements from uploaded instructions (PDFs or text), generate tasks, assign team roles, and send progress updates through integrated communication tools.

Objectives

1. Streamline project planning for academic teams.
2. Reduce confusion caused by fragmented communication (Discord, Slack, etc.).
3. Automatically generate to-do lists and assign subtasks based on team members' roles.

Key Features

- PDF/Document upload for project requirements.
- AI-generated project breakdown (tasks, roles, subtasks).
- Real-time collaboration dashboard.
- Supabase backend for data storage.
- ChromaDB for semantic memory.
- FastAPI backend integrated with Claude (Anthropic) for reasoning and planning.

Deliverables

- A working prototype that allows file upload and automatic task generation.
- A dashboard for assigning and tracking tasks.
- Database schema design for tasks, roles, and subtasks.

Technical Stack

- Frontend: React.js (optional for MVP)
- Backend: FastAPI
- Database: Supabase (PostgreSQL)
- Vector Store: Chroma
- AI Model: Anthropic Claude
- Authentication: Supabase Auth

Team Roles

- Backend Developer: API & database integration
- Frontend Developer: Dashboard and UI components
- Project Manager: Workflow planning and testing
- AI Engineer: Claude & Chroma integration

Timeline

Week 1: PDF upload and parsing

Week 2: AI task generation and database setup

Week 3: Subtask specialization and dashboard UI

Week 4: Testing and final demo