Project-title: University-Connector: Academic Social Network

Team-Name: TEAM-GRADIENT

Problem Addressed:

Traditional academic environments often lack effective digital platforms for collaboration, knowledge sharing, and networking among students and researchers. Students struggle to:

- Find peers with similar academic interests

- Access research papers and collaborate on projects

- Build professional networks within their field

- Get personalized learning paths and academic assistance

Solution Description

U-Connect is a comprehensive academic social networking platform designed specifically for university students and researchers. It creates a digital ecosystem where users can connect with peers, share research, collaborate on projects, and access AI-powered learning tools. The platform bridges the gap between academic learning and professional networking by providing features tailored to educational needs.

Key Features

Social Networking

- *Profile System:* Academic profiles highlighting university, department, and research interests

- *Connection System:* Connect with peers based on academic interests and departments

- *Post Sharing:* Share text, media, documents, and research papers

Research Collaboration

- *Research Paper Repository:* Upload, search, and access academic papers

- *Collaboration Requests:* Find and connect with potential research collaborators

- *Document Sharing:* Share and collaborate on academic documents

AI-Powered Learning

- *Learning Path Generator:* AI-generated personalized learning paths based on interests

- *PDF Q&A Assistant:* Ask questions about uploaded PDF documents

- *YouTube Video Summarizer:* Get concise summaries of educational videos

- *Flashcard Generator:* Create study flashcards from notes or topics

Communication

- *Messaging System:* Real-time chat with connections

- *AskU AI Assistant:* AI-powered chat assistant for academic queries

- *Event Creation:* Create and share academic events

Technical Stack

Frontend

- *Framework:* React.js with Vite

- *Styling:* Tailwind CSS

- *State Management:* React Context API

- *UI Components:* Custom components with Lucide icons

Backend

- *Framework:* FastAPI (Python)

- *Database:* PostgreSQL

- *Authentication:* JWT-based authentication

- *File Storage:* Supabase and Cloudinary

- *AI Integration:* OpenAI API, Google API

External Services

- *Cloud Storage:* Supabase for research papers, Cloudinary for profile pictures

- *AI Services:* OpenAI for learning path generation and AI assistance

- *Email Service:* Brevo API for notifications

Impact & Future Scope

Current Impact

- Facilitates academic networking across departments and universities

- Provides AI-powered tools to enhance learning and research

- Creates a centralized platform for academic resource sharing

- Enables discovery of collaboration opportunities

Future Scope

- *Enhanced AI Features:* Expand AI capabilities for research analysis and paper recommendations

- *Mobile Application:* Develop native mobile apps for iOS and Android

- *Academic Institution Integration:* Partner with universities for official adoption

- *Research Analytics:* Add citation tracking and impact measurement tools

- *Expanded Learning Tools:* Integrate more specialized learning resources by field

- *Global Academic Network:* Scale to connect students and researchers worldwide