



Inspiring Excellence

**CSE471: System Analysis and Design**  
**Assignment on Functional Requirements**

**Proposed Project Title: ThesisSync—AI-Powered Thesis  
Collaboration & Management Platform**

Group No: 05, CSE471 Lab Section: 08, Spring 2025	
ID	Name
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**Submission Date: 9th July, 2025**

## **Tech Stack:**

- Language: Javascript
- Framework: MERN
- Styling: Tailwind CSS
- Database: MongoDB
- ORM: Prisma
- Deployment: Vercel

## **Functional requirements:**

### **Module 1: Profile Management (5 Features)**

1. [SAIYED] Students/supervisors sign up with email, password, and role (student/supervisor/admin).
2. [NAFI ALIF] Users edit profiles (skills, research interests,upload profile picture and academic documents, contact info etc).
3. [NAFI ALIF] Admins assign/revoke supervisor roles and ban abusive users.
4. [HOMAIRA] Students post thesis ideas in the "Idea Pool" with tags (e.g., "AI").
5. [RADITO] Video Call system which will later integrate with the team chat feature.

### **Module 2: Matching & Collaboration (5 Features)**

1. [SAIYED] Students create "Team Requests" (required skills, thesis topic).
2. [NAFI ALIF] AI chatbot for summarization and related topic explanation.
3. [SAIYED] Notifications for supervisor request accept/reject.
4. [HOMAIRA] Advanced search: Filter supervisors by department/rating/availability.
5. [RADITO] Team chat feature for thesis groups with file sharing.

### **Module 3: Progress Tracking (6 Features)**

1. [HOMAIRA] Dashboard shows thesis phases (proposal, defense etc) with marks and deadlines.
2. [SAIYED] Track Ongoing Thesis with Gantt Chart View
3. [RADITO] Email/in-app notifications for upcoming deadlines.
4. [NAFI ALIF] Search/filter thesis projects by keywords (e.g., "blockchain").
5. [RADITO] Activity log (e.g., "Supervisor commented on Chapter 2").
6. [HOMAIRA] Previous work history of users and supervisors.