

## Functional Requirements

These define the core functionalities SkillSync must provide.

### 1.1 User Authentication & Profile Management

- The system shall allow users to sign up and log in using **Google, email, or phone number** (via Firebase Authentication).
- The system shall allow users to create and update **personal profiles**, including skills, education, and experience.
- The system shall support **role-based accounts** (e.g., Student, Fresh Graduate, Career Advisor).

### 1.2 Skill Assessment & Career Path Suggestion

- The system shall enable users to **input their skills and experience** for assessment.
- The system recommends career paths based on the user's existing skills and interests.
- Users can explore structured roadmaps tailored to their desired careers.
- The system shall compare users' skills with **predefined career paths** and suggest missing skills.
- The system allows users to update and track their learning progress over time.
- The system shall provide a **progress indicator** showing how close users are to a specific career path.

### 1.3 Resume Analysis & Enhancement

- The system shall allow users to **upload their resumes** for analysis.
- The system shall provide **feedback and suggestions** to improve resumes using **AI/NLP models**.
- AI-driven recommendations suggest additional skills that can expand career opportunities.
- The system shall generate **automated resume templates** tailored to specific job applications.

### 1.4 Notifications & Real-Time Updates

- The system shall support **push notifications and email alerts**.
- The system shall notify users **when new careers** are discovered or added to their fields.
- The system shall send alerts for newly joined mentors or career advisors.
- The system shall send alerts when new courses or suggestions are added
- The platform includes a bookmarking feature to save recommended career paths and skill resources.
- Users can provide feedback on career recommendations and skill improvement plans.

## 1.5 Extra requirements

- System shall provide online verified courses ( Udemy , Coursera , Youtube links )
  - System shall support paid premium plan to allow users chatting with mentors
  - Chatting with mentors shall be for predefined periods of time
  - System shall allow newly joined users to chat with mentors for only 1 trial
- 

## Non-Functional Requirements

These define the quality attributes and performance expectations.

### 2.1 Performance & Scalability

- The system shall handle up to **10,000 concurrent users** without performance degradation.
- Response time for career suggestions shall be **less than 2 seconds**.
- The system shall optimize database queries to minimize load times.
- The system should be scalable for future integrations with external learning platforms.

### 2.2 Security & Privacy

- User passwords shall be encrypted using **bcrypt** or an equivalent hashing algorithm.
- Sensitive user data (e.g., resumes, personal details) shall be **stored securely with role-based access control (RBAC)**.
- The system shall comply with **GDPR** for data protection and user consent.

### 2.3 Availability & Reliability

- The system shall maintain **99.9% uptime**.
- Redundant cloud services (Firebase, PostgreSQL, etc.) shall be used to ensure reliability.
- Regular **data backups** shall be implemented for disaster recovery.

### 2.4 Usability & Accessibility

- The UI shall be **mobile-friendly and responsive**.
  - The system shall follow **WCAG 2.1** accessibility guidelines.
  - The onboarding process shall be **simple and intuitive**.
  - The app should support both Android and iOS platforms.
- 

## System Constraints

User Constraints:

1. Users must be students or fresh graduates to access personalized recommendations.
2. Users are required to provide accurate and truthful information about their skills and experience.
3. Users cannot apply for jobs through the platform (it is not a job-seeking app).
4. Users can only track and update their progress within predefined career roadmaps.
5. Users must have internet access to utilize all features of the app.

### **System Constraints:**

1. The system will only support English in its initial version.
  2. AI recommendations depend on predefined career paths and available skill datasets.
  3. The app will provide real-time coaching and will suggest resources and roadmaps.
  4. System recommendations are limited to careers within the technology and business sectors initially.
  5. The platform does not offer offline courses centers but may integrate this feature later.
- 

## **Assumptions & Dependencies**

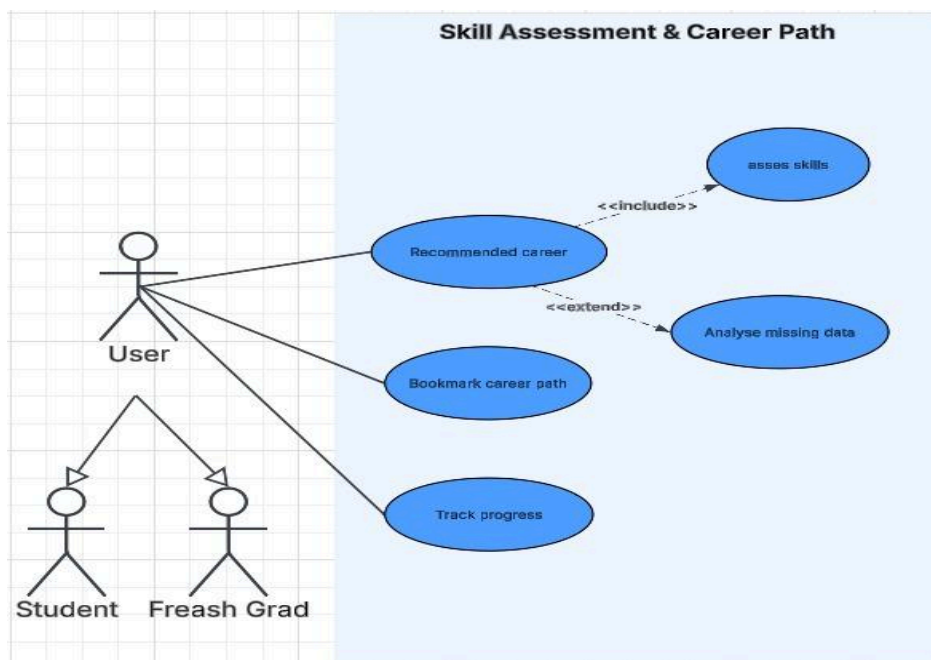
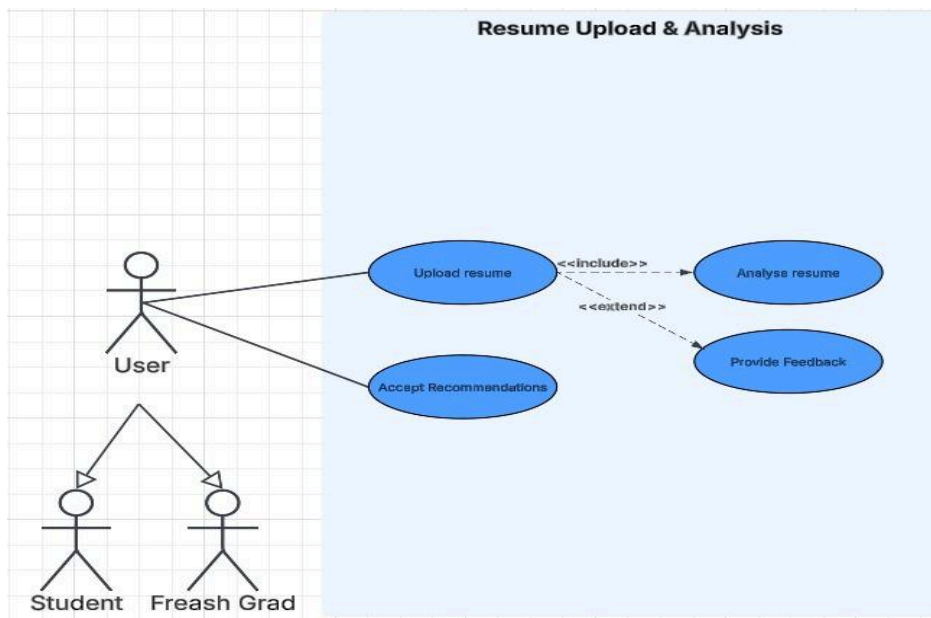
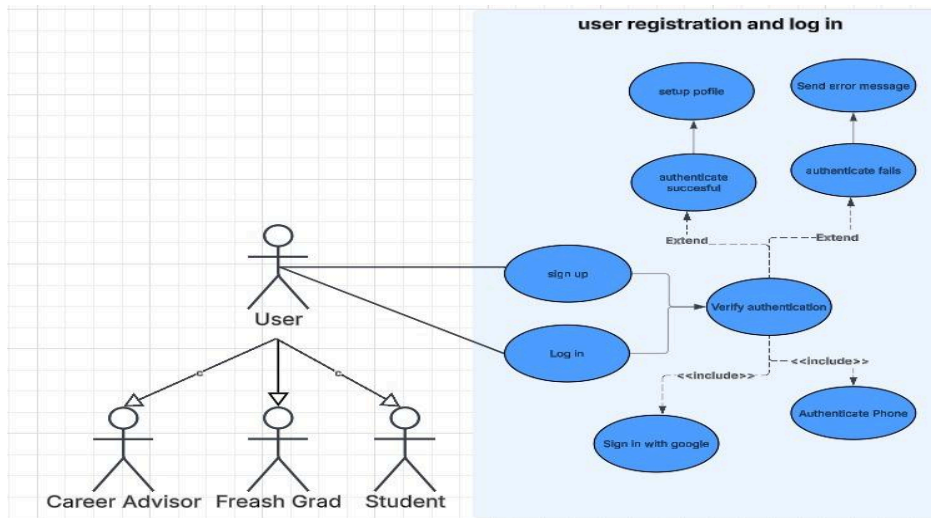
### **Assumptions:**

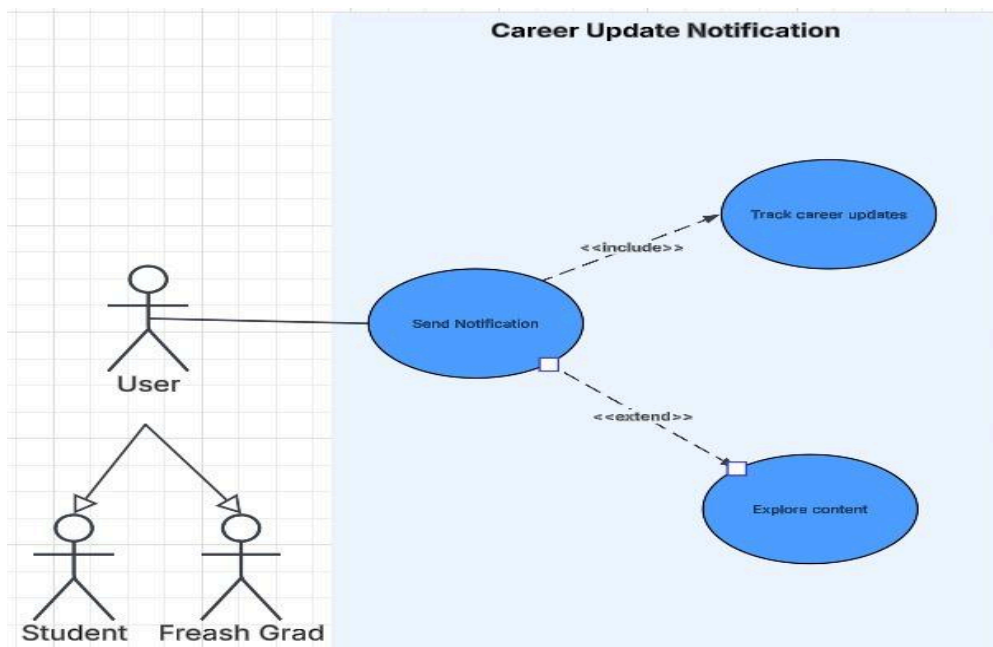
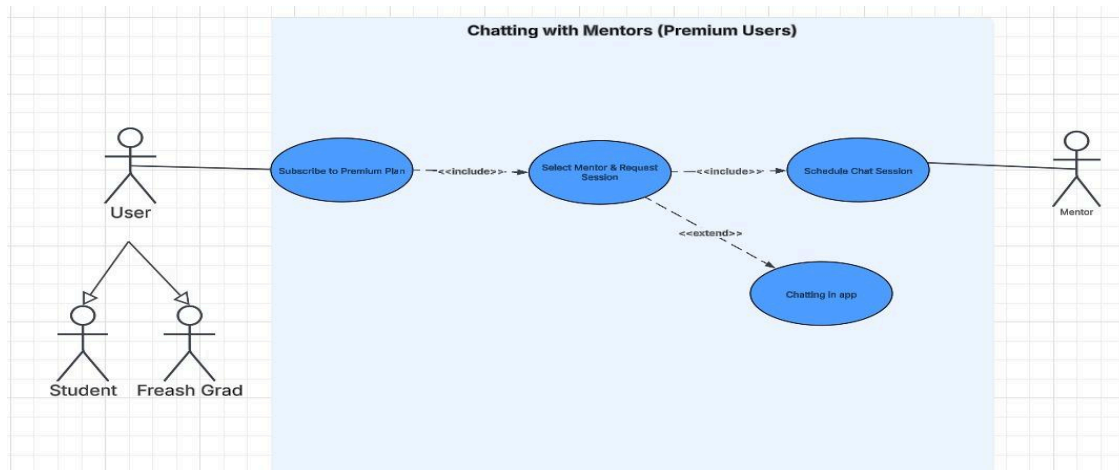
1. Users have a basic understanding of how to navigate a mobile application.
2. Users are willing to actively engage with the platform to enhance their career skills.
3. The recommendations provided by the system are taken as guidance and not definitive career decisions.
4. The AI model will improve accuracy over time based on user interactions and feedback.
5. Learning resources provided are publicly available or linked to third-party platforms.

### **Dependencies:**

1. The platform depends on Firebase for authentication and real-time database operations.
2. AI-based recommendations depend on machine learning models trained on career-related data.
3. The system requires periodic updates to improve accuracy and add new career paths.
4. The app is dependent on third-party APIs (such as learning platforms) for skill-building content.
5. Hosting and deployment depend on cloud services like Firebase and Render for backend functionality.

## Use cases





## User stories:

### 1. User Authentication & Profile Management

- As a student, I want to sign up using Google or email, so that I can quickly access the app.
- As a fresh graduate, I want to update my skills and experience, so that I receive better career suggestions.
- As a career advisor, I want to mentor students, so that I can help them find their ideal career paths.

### 2. Skill Assessment & Career Path Suggestion

- As a student, I want to improve my skills, so that I receive career recommendations.
- As a user, I want to see how far I am from a specific career, so that I can learn the missing skills.

-As a fresh graduate, I want to track my career roadmap progress, so that I can stay on track with my learning goals.

### **3. Resume Analysis & Enhancement**

-As a student, I want to upload my resume, so that I can get AI-driven feedback on improvements.

-As a user, I want to receive personalized resume suggestions, so that I can improve my chances of securing a job.

### **4. Notifications & Real-Time Updates**

-As a user, I want to get notified about new mentors, so that I can connect with them for career advice.

-As a student, I want to receive alerts for new career suggestions, so that I don't miss out on new opportunities.

### **5. Extra Features**

-As a premium user, I want to chat with mentors, so that I can get career advice.

-As a new user, I want to have a free trial chat with a mentor, so that I can decide if the premium plan is worth it.