API Descriptions

I. **Learning Management System (LMS) APIs**

Automatically import assignments and deadlines into the platform; track grade progress and notify students of changes

- Endpoint: /api/v1/courses/{course_id}/assignments
- Functionality
    - Retrieves the list of assignments for specific course
    - Fetch due dates and submission statuses
    - Pull grade data for performance tracking
- Endpoint: /api/v1/users/self/enrollments
- Functionality
    - Fetch enrolled courses for a student
    - Sync class schedule and course information

II. **AI & Machine Learning APIs**

OpenAI API: Analyze study habits and recommend optimal study sessions; suggest topics to review based on past performance

- Endpoint: /v1/completions
- Functionality
    - Generate AI-driven study recommendations based on user input
    - Suggest focus areas based on previous study sessions and grades

III. **Calendar & Scheduling APIs**

Allow users to sync their study schedules with Google Calendar; Send push notifications for upcoming deadlines and sessions

- Endpoint: https://www.googleapis.com/calendar/v3/calendars/{calendarId}/events
- Functionality
    - Add study sessions and assignment deadlines to personal calendar
    - Send reminders for upcoming study sessions

IV. **User Authentication & Security APIs**

Enable single sign-on (SSO) with university credentials; ensure secure, role-based access for different user types

- Endpoint: /OAuth/token
- Functionality

- Secure log in using university credentials or third-party authentication (Google, Microsoft, etc)
- Ensure role-based access control (students, professors, administrators)

V. **Notification & Messaging APIs**

Notify students about assignment updates and study reminders; send alerts for recommended study topics based on AI insights

- Endpoint: /2010-04-01/Accounts/{AccountSid}/Messages.json
- Functionality
    - Send SMS reminders for due dates and study sessions
    - Push AI-generated study tips to users
- Endpoint: https://fcm.googleapis.com/fcm/send
- Functionality
    - Send real-time push notifications to mobile and web users