

## I. Executive Summary

### Problem

**University student life outside the official Learning Management System (LMS) is highly fragmented. Students face significant difficulty in:**

1. Discovering relevant, non-official campus information (clubs, events, student-led workshops).
2. Efficiently forming effective and contextually relevant academic study groups. This fragmentation leads to increased stress, social isolation, and inefficient use of time.

### Solution (MVP Focus)

The Campus Connect MVP will launch with a single, high-value feature: the AI-Driven Study Group Matchmaker. This tool will leverage student enrollment data and specified study needs to automatically create small, highly compatible peer study groups, addressing the core academic pain point.

### Business Goal

- Primary Goal: Validate the need for a centralized, student-focused platform by achieving high engagement with the Matchmaker feature.
  - Metric: Achieve a 70% match-request-to-group-confirmation rate within the first three months of launch.
  - Long-Term Impact: Increase student engagement and academic success, leading to improved student retention metrics for the university partners.
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## II. Target User & Persona

### Target User

The primary target segment is **freshmen** university students. They are the most vulnerable to the core problems of decentralized information and social isolation, as they are new to the campus environment.

#### Persona: Anjali, The Freshman

- **Name:** Anjali
- **Year:** Freshman
- **Major:** Computer Science

- **Motivations:** Wants to succeed academically, make new friends, and explore campus clubs.
  - **Tech Habits:** Uses WhatsApp and Telegram for existing friend groups, checks campus email daily, and uses Discord for gaming. She is comfortable with new apps but gets easily overwhelmed by *too many* channels.
  - **Specific Communication/Study Pain Points:**
    - Finds it frustrating to check 4-5 different platforms (email, WhatsApp, physical boards, etc.) for club meeting times or class announcements.
    - She needs a study group for her difficult "Data Structures" course but doesn't know who is at the same pace or needs the same help, so she hasn't started one, relying instead on solo study, which leads to increased stress.
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### III. Solution Overview (MVP)

The MVP of Campus Connect will focus solely on the **AI-Driven Study Group Matchmaker**.

#### Minimal Viable Product (MVP) Definition

The MVP will provide a single, focused feature that validates the core "Formation of Study Groups" problem. It will be a platform where a user can enter their academic details and study needs, and the system will automatically match them with a small, relevant group of peers.

#### Core Feature: AI-Driven Study Group Matchmaker

The feature will work as follows:

1. **User Input:** Anjali inputs her course (e.g., Data Structures), desired study time (e.g., evening), pace (e.g., fast-paced, focused), and specific need (e.g., help with recursion).
  2. **AI Matching:** The system uses the **AI Component** to cross-reference this data with other users' profiles, course enrollments, and stated needs.
  3. **Group Creation & Notification:** The system proposes a match (e.g., 3 students all needing help with recursion in Data Structures, available 7-9 PM).
  4. **In-App Chat:** A temporary, simple group chat is created for the matched study group to plan their first meeting.
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#### IV. User Stories & Acceptance Criteria

We will focus on **5 high-priority** user stories for the MVP.

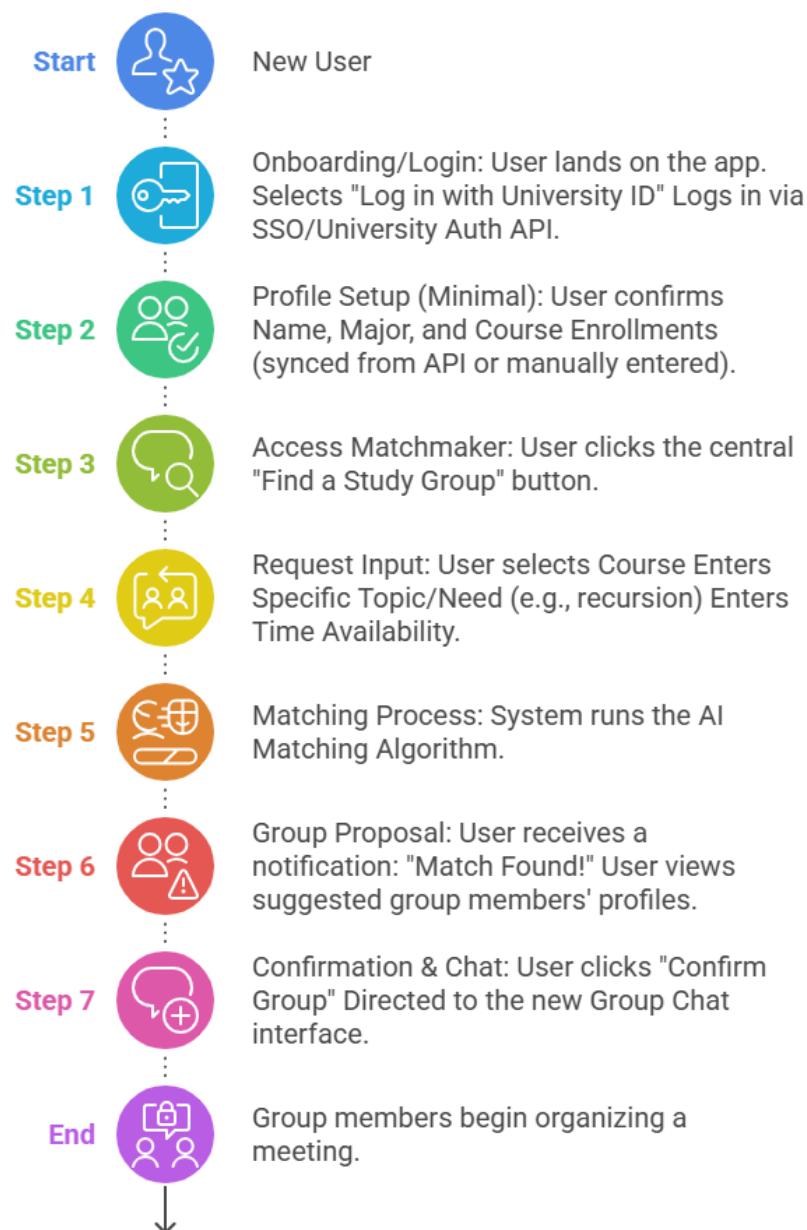
#	User Story	Acceptance Criteria (Clear, Testable Conditions)
1	<b>As a Freshman, I want to input my course and study goal, so that I can be matched with a relevant study group quickly.</b>	1. System must accept course name, time availability, and study topic/goal. 2. A group suggestion must be presented to the user within 60 seconds of submitting the request. 3. The matched group must not exceed 5 members.
2	<b>As a matched student, I want to view a brief profile of the other group members, so that I can feel comfortable joining the group.</b>	1. User profile must display first name, course, and stated study goal. 2. Direct contact information (e.g., phone number) must <i>not</i> be visible.
3	<b>As a group member, I want to have a simple chat functionality with my new group, so that we can organize our first meeting.</b>	1. A new, dedicated chat is instantly created upon group match confirmation. 2. The chat must support sending plain text messages. 3. The chat must disappear after 7 days of inactivity to encourage in-person/alternative communication.
4	<b>As a user, I want to specify a desired study pace (e.g., 'revision' vs 'help with basics'), so that I am grouped with people at a similar academic level.</b>	1. Matching algorithm must prioritize the 'study pace' tag during group formation. 2. Users must select one pace from a predefined list (e.g., 'Remedial', 'Average', 'Advanced').
5	<b>As a student, I want to easily sign in using my university credentials, so that I don't need to create a new account and verify my student status.</b>	1. SSO/University Auth API integration must allow successful login with a valid university email address. 2. The login process must take less than 15 seconds.

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## V. User Flow Diagram

The User Flow Diagram will be a step-by-step visual representation of the journey for a new user successfully joining a study group.

### Joining a Study Group: A User Journey



Made with Napkin

## VI. Technical Requirements

The focus is on the AI component and essential integrations.

### Basic Technical Needs

- **Backend:** Cloud-based, scalable architecture (e.g., Microservices).
- **Front-end:** Cross-platform mobile development (e.g., React Native) for rapid deployment.
- **Security:** Adherence to university data privacy policies.

### AI Component Focus

The AI component is essentially a **recommendation engine** that uses collaborative filtering and rule-based logic.

- **Expected AI Inputs:**
  - course\_id (e.g., CS-301)
  - preferred\_study\_time\_blocks (e.g., Tuesday 7-9 PM)
  - specific\_topic\_keywords (e.g., 'recursion', 'linked lists')
  - user\_enrollment\_data (validated course registration)
- **Expected AI Outputs (A Curated List of Potential Group Members):**
  - A list of user IDs (3-5 users) that maximize similarity based on all input criteria.

### Required Third-Party APIs

- **SSO/University Auth API:** Essential for secure, verified student login and enrollment verification.
- **Campus Course/LMS API (Optional, for Phase 2/Enhancement):** To automatically import a student's current course list, reducing manual input and ensuring accuracy.

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## VII. Launch Success Metrics (KPIs)

These quantitative metrics are mapped to the core **Matchmaker feature** and the **AARRR Funnel**.

AARRR Funnel Stage	Key Performance Indicator (KPI)	Goal Metric (3 Months Post-Launch)
<b>Acquisition</b>	<b>First-Time Sign-Up Rate</b>	30% of target freshmen population
<b>Activation</b>	<b>Match Request to Group Confirmation Rate</b>	70% of students who request a match confirm a group
<b>Retention</b>	<b>7-Day Active Users (DAU)</b>	40% of confirmed groups have at least one message sent in the in-app chat after 7 days.
<b>Referral</b>	<b>Net Promoter Score (NPS)</b>	+30 among activated users (measures likelihood to refer a friend).
<b>Revenue (Not applicable for MVP, focus is on Engagement)</b>	<b>Success Event Completion Rate (Study Session)</b>	25% of all confirmed groups report a 'successful first study session' (via a brief in-app survey/button).