Team 16 - Product Backlog

Billy Chen, Catherine Mao, Michael Law, Phillip Bernwanger, Victor Fenton Aguilar

Problem Statement:

The CampusLink project aims to develop a robust, comprehensive application tailored for university environments that will empower student users to foster connections with classmates, get involved in campus life, and facilitate efficient academic collaboration. This application will serve as a centralized, safe, free-willed, and inclusive hub for students to connect with selected peers based on their profile and courses, and match their schedules to find optimal times for both academic collaboration and social interaction.

Background Info:

- **Audience**

  CampusLink is catered for a university environment. Specifically, the initial version of the application will be available only for users that register an account with a valid Purdue University email address. CampusLink uses available university interfaces to obtain information about courses, student profiles, landmarks, and locations around the

university campus. When a student logs into CampusLink, they dive into a virtual college community where they can connect with fellow students with similar vocation or interests for social or academic interactions. Prospective students with a registered email may also use CampusLink to discover and connect with other future students, or to enhance a campus visit by finding activities and friends on the app. Lastly, university faculty and staff may also be users of CampusLink, be it with the same purpose and features as a student user, or to promote the tools and groups to the students under their guidance.

- **Similar Platforms**

CampusLink is the only platform that efficiently combines a social student platform with an academic productivity, discussion, and scheduling tool. Compared with other academic discussion platforms like Piazza and Ed, CampusLink offers a more voluntary, unsupervised, and open forum by fostering a sense of community, implementing social features, offering privacy options for sharing specifics, and enhancing voluntary academic interactions. This application has some degree of similarity with other existing university-tailored social applications like JoinMi, but it superpasses them by invoking a close-knit community of university-verified users only, offering more advanced academic productivity tools, and matching users by record, interests, and preferences.

- **Limitations**

In contrast to existing university messaging apps like GroupMe, which often provide a professional environment but may lack the warmth and openness for students to freely connect and seek answers to their questions, we aim to create a platform that fosters genuine friendships and open communication. We believe that students should have a space where they can easily make friends, collaborate, share their thoughts, and establish

new connections without hesitation. Our goal is to cultivate a welcoming community where students of all backgrounds can come together, interact, and forge meaningful relationships in an inclusive and comfortable environment. One limitation of CampusLink's approach is that university interfaces do not allow for student's current academic information to be directly pulled from their account, which is why users will have to manually input their current classes and schedules.

Functional Requirements

A) User account

1. As a user, I would like to be able to sign up for a CampusLink user account and set a password to log back into my account.

2. As a user, I would like to use my Purdue student email to validate my account.

3. As a user, I would like to reset my password if I forget my previous password.

4. As a user, I would like to set answers to security questions as means to recover a forgotten password to my CampusLink account.

5. As a user, I would like to delete my CampusLink user account at any time.

B) User profile

1. As a user, I would like to create a personalized profile with my name, email, profile picture, course information, area of study, country/state/city of origin, my interests, and more information, up to my disclosure.

2. As a user, I would like to modify my profile at any given time.

3. As a user, I would like to choose my profile picture from my gallery.

4. As a user, I would like to be able to select which of my personal information I choose to disclose with others and which shall not be visible to the public.

C) Collaborative Calendar

1. As a user, I would like to see an overlapping but clear calendar with users' (who share a 'circle' with me) available time blocks, class times, and shared activities.

2. As a user, I would like to create a collaborative calendar and share it with my friends to join.

3. As a user, I would like to have the option to link external accounts to import calendars from other applications like iCloud, Google, and/or Outlook Calendar.

4. As a user, I would like to see a clear busy vs. available view of a calendar that clearly shows time blocks where everyone in the circle is available or which specific people are not available at particular times.

5. As a user, I would like to have the option to share my schedule with friends in the app or with my circles and choose which details about my schedule and classes are visible to others.

6. As a user, I would like to be able to create new events on shared calendars and have it appear and notify in the calendars of everyone else in my circle.

7. As a user, I would like to be able to select or invite specific participants in the circle to be included in the new events that I create on the calendar.

D) Messaging System

1. As a user, I would like to send and receive direct messages to another user, be it within the CampusLink application or through an external platform.

2. As a user, I would like to send and receive messages to a group chats for circles, courses, or communities that I am a part of, be it within the app or externally.

E) Friend List

1. As a user, I would like to add another user as a friend.

2. As a user, I would like to delete a user from my friend list.

3. As a user, I would like to be able to view a full list of my added friends at any time on my profile.

4. As a user, I would like to view my received friend requests from other users and choose whether to accept or decline them at any time.

5. As a user, I would like to choose whether my friend list is visible to others.

F) Circle Creation and Group Chats

1. As a user, I would like to be able to create in-app groups or 'Circles' with any users of my selection, be it within my friend list or not.

2. As a user, I would like to use CampusLink to join or create group chats with students who have the same areas of study, courses, social circles, or interests.

3. As a user, I would like to be able to create or join external group chats in a platform of my choice (among the ones available).

G) Classes I Attend

1. As a user, I would like to choose a course to add into my class list that I take for the current semester from the entire course list (all the courses that are offering by Purdue for the current semester).

2. As a user, I would like to delete a course from my class list.

3. As a user, I would like to filter the Purdue course catalog by keyword search.

4. As a user, I would like to choose a course from the dropdown menu of the entire course list.

H) User Recommendations

1. As a user, I would like to see the 5 users that share similar interest, majors, or extracurricular activities when I click on the recommendation list

2. As a user, I would like to see another 5 users that share similar interest, majors, or extracurricular activities when I click on the recommendation list when I click on the refresh button

I) Campus Map

1. As a user, I would like to see which building (full name) my class is located at.

2. As a user, I would like to see the most optimal walking, biking, or driving path from my current location to my precise class's location.

3. As a user, I would like to see which floor my class is located at inside the building

J) Forum

1. As a user, I would like to have access to a public forum where I can post text prompts to look for matching users to embark in an activity or to ask a question.

2. As a user, I would like to see relevant posts from others in a forum and be able to reply to their post either publicly or privately.

3. As a user, I would like to be able to send a friend request to someone who has posted in the forum.

4. As a user, I would like to choose whether my posts in the forum are anonymous.

5. As a user, I would like to have privacy and disclosure choices for information about my forum posts and my profile.

Non-Functional Requirements:

Architecture and Performance

Our project's frontend will be written in html, css and javascript. The backend will be written in python and hosted on Cloud SQL. We will access google map api for the map features and the purdue api for the courses' information. We hope to have a reasonable response time of less than several seconds.

Security

CampusLink will utilize a student's purdue.edu email to ensure that only Purdue students are able to access the application. This feature doubles as a form of two factor authentication, preventing users from impersonating other students. We will send the sign up link as requested from a secure, predetermined email account. User data will be stored in a highly secure and encrypted MySQL database. Passwords are to be stored safely and kept private using a one way SHA1 hash with a salt, ensuring that user accounts can not be accessed maliciously. Finally, user profile data can be private based on user discretion. Profile information such as class schedule, extra-curriculars, and hobbies, may only be accessed by friends the user has accepted into their circle.

Response Time

Our web app prioritizes a seamless experience for students as they find and access their course information. With a rapid response time of under 200 milliseconds for class searches, we ensure efficient access without interrupting the course-finding process. The user-friendly interface caters to students of all backgrounds, while cross-browser and cross-screen compatibility guarantee

accessibility from any device. Whether planning schedules individually or collaborating with peers, our app simplifies course management and fosters connections among students.

Usability

The interface should be user-friendly and all the main features should be easy to navigate: users can easily find where they can modify their profile, where they can chat with friends, and where the maps that find the optimal path from the user location to the class location are. The UI design should be intuitive so that users can easily choose their courses from the provided course list and can always go back to the main page within 3 clicks. There are also clear distinctions between direct messages and group chats so that users will not get confused.

Hosting/Deployment

Compuslink will host on cloud SQL which is a fully-managed MySQL service provided by google cloud. If a hosting server is required to keep the website running, CampusLink shall use the Purdue University environment data.cs.purdue.edu to host and run a server.