

## Domain research

1. Identify a domain (what is a domain?)
2. Identify research, for review and critique
3. Identify opportunities for social/mobile design (what is social?)

## Research Papers

Design and Application of a Comprehensive Service Platform for College Students' Mental Health

Self-tracking for Mental Wellness: Understanding Expert Perspectives and Student Experiences

Designing for self-awareness: supporting students' reflexive interactions based on photos

Food, Mood, Context: Examining College Students' Eating Context and Mental Well-being

Food, mood, Context: Examining College Students' Eating Context and Mental Well-being

- <https://dl.acm.org/doi/10.1145/3533390>
- This study uses a real-time eating detection system to measure how college students' eating contexts such as skipping meals or dining with others relate to stress, anxiety, depression, and overall mood. It finds negative correlations between irregular eating and mental well-being, while having meals with friends or family improves well-being.
- For the design proposal: Incorporate sensor-based detection of mealtime patterns to trigger supportive interventions, like reminders to eat or mood-boosting prompts when students dine alone.

IoT for health and well-being: A case study and a call for Action

- <https://dl.acm.org/doi/10.1145/3594806.3596539>
- The paper describes a real-world deployment of an IoT test bed in an elementary school, focused on regulating indoor climate like CO<sub>2</sub> levels to improve health, concentration, and well-being
- For the project: We could possibly argue for environmental sensing capabilities such as monitoring study space conditions to recommend breaks or environment adjustments

The relationship between sense of belonging and student outcomes in CS1 and beyond)

- <https://dl.acm.org/doi/10.1145/3446871.3469748>
- The study finds that students sense of belonging is significantly linked to retention, academic performance, and self-worth in computing courses, especially in early semesters
- For the project: we could highlight the importance of social connection as part of well being design, for example features that enable peer support, buddy matching or group check-ins

StudentsSADD: Rapid Mobile depression and suicidal ideation screening of college students during the coronavirus pandemic

- <https://dl.acm.org/doi/10.1145/3534604>
- The article talks about a mobile system for rapid screening of depression and suicidal ideation among college students using machine learning, which enables early detection and potential intervention
- For the project: we could use this as an inspiration for sensitive, privacy-aware emotional screening or check-in features in our design, like optional mood surveys with direct links to university support

Examining Procrastination in Online Learning Environments: Implications for Student Performance

- <https://dl.acm.org/doi/10.1145/3678392.3678411>
- This article links student wellbeing, stress, procrastination and academic performance. It explores how social media based learning can help mitigate procrastination
- We could consider things like study buddies, structured schedules or learning prompts tied to stress indicators to implement in our project.

Exploring the Effects of Yoga on Self-Esteem and Emotional Well-Being in Stressed College Students: A Randomized Controlled Trial

- <https://dl.acm.org/doi/10.1145/3652037.3663924>
- Examines how yoga sessions improved self-esteem and emotional wellbeing in students
- This article shows how physical activity benefits students. Our solution could prompt for physical activity when stress is high

More specific ones:

Understanding the Impact of Collaborative Learning on Sense of Belonging

<https://dl.acm.org/doi/10.1145/3568812.3603449>

- Analyzes the effects of collaborative learning on students' sense of belonging across different computing courses, emphasizing the importance of inclusive pedagogies.

Evolution Features and Behavior Characters of Friendship Networks on Campus Life

<https://arxiv.org/abs/2004.06266>

- Examines the evolution of friendship networks on campus by analyzing behavioral data, providing insights into social dynamics and peer relationships.

<https://www.torrens.edu.au/stories/blog/student-life/the-5-big-benefits-of-studying-with-friends-and-how-it-could-save-you-money>

- This source talks about why it is good for students to study together
- They reference to the research: <https://pubmed.ncbi.nlm.nih.gov/21895364/>
- The points this source talks about and also is supported by research is
  - Studying with friends is good for your mental health
  - Friends on campus keep you motivated and reduce procrastination
  - Studying with friends improves your grades
  - Learning with friends encourages soft skills development
  - Studying with friends can now also save you money

### Inclusive Study Group Formation at Scale

- Underrepresented students often struggle to form high-quality, long-term study groups, especially in remote learning environments.
- The paper aims to address structural barriers and social isolation by designing a scalable, inclusive, and flexible system for study group formation.

### Experiences With and Lessons Learned on Deadlines and Submission Behavior

- This study investigates how different deadline placements affect student submission behaviour and performance in computer science courses.
- It explores procrastination, time management, and the timing of submissions in relation to correctness.

## The Idea

We are working with University Students aged 18-24 in new academic environments to create opportunities for better health and well-being through an inventive exploration of the possibilities of social and contextual computing.

- University students often struggle to balance study with health and social activities.
- Academic pressure leads to irregular sleep, poor diet, skipped exercise, and stress.
- Current tools (like Notion or Google Calendar) focus mainly on productivity, not well-being.

## Other suggestions (brainstorm)

- Focus on loneliness and connecting with other students:
  - Could have something hardwired to make it easier to talk to new people on campus and make new friends in breaks and lunches
    - Example: badges/bracelets that light up different colours if you are open to make new relations, are busy working etc.
  - Maybe also an area where people who are looking to make new friends can sit

- Another idea: get a random lunch buddy by ordering your food at a terminal at campus & get matched with another random student
- Focus on structuring your day-to-day and procrastinating:
  - Idea 1: Sign up for a collaborative group in your subject and get study buddies through the semester to work through the assignments
  - Idea 2: Focus Pods on campus where students can sit to work efficiently
    - Light red when it should be quiet study
    - Light green when there is a break and you can befriend the other students in the room

### **Collaborative Productivity & Daily Life Support**

Study-group platforms that combine task management with social motivation.  
Shared meal planning or cooking apps for student flats.

Peer accountability tools for habits, workouts, or daily routines.

## **Interview questions**

Do you usually take breaks while studying?

What does health mean to you?

When was the last time you prioritized studying over your health?

What does your time on campus look like when you are not studying?

What does your typical day at the library look like?

Do you prefer break activities that are social, individual, or a mix of both? Why?

What kind of activities would help you reduce stress during breaks?