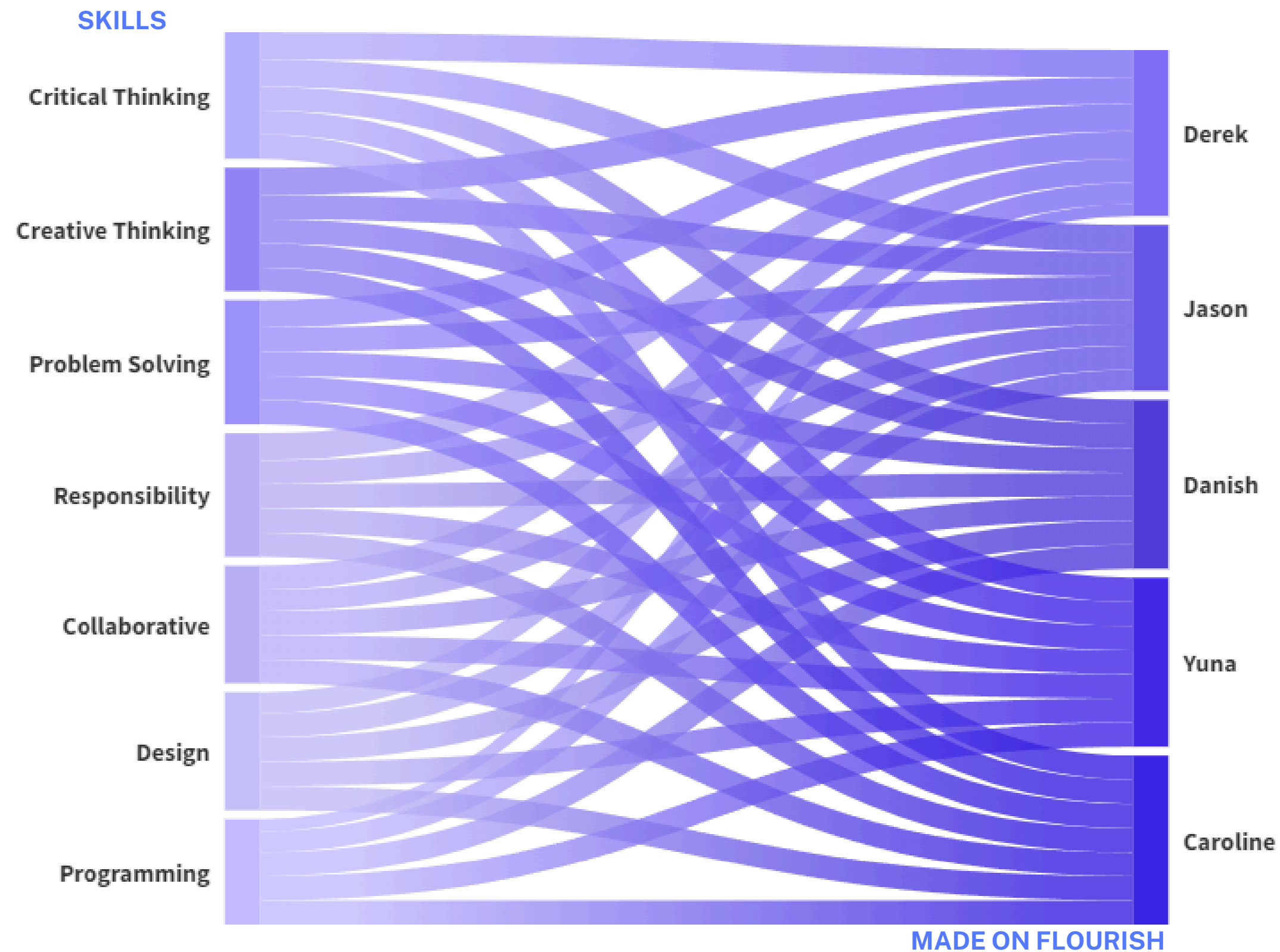




DESIGN PROPOSAL

SOCIAL AND MOBILE COMPUTING



Derek Joel George z

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"You miss 100% of the naps you don't take." — Unknown

Poor Sleep Hygiene can lead to **reduced academic performance, mental health problems, and decreased overall well-being.**

Many university students struggle with poor sleep hygiene due to **varying class times, social activities, and late night study sessions** (Lu et al., 2023).

Our Domain is ***Improving Sleep Hygiene in University Students (UQ).***



Lu, S., Stone, J. E., Klerman, E. B., McHill, A. W., Barger, L. K., Robbins, R., Fischer, D., Sano, A., Czeisler, C. A., Rajaratnam, S. M. W., & Phillips, A. J. K. (2023). The organization of sleep-wake patterns around daily schedules in college students. SLEEP. <https://doi.org/10.1093/sleep/zsad278>

SOLUTIONS

PROS

CONS

WEARABLE SLEEP-TRACKING DEVICES

Provides **continuous feedback** to help the user observe changes in their habits.

It could be **uncomfortable** for the users in long-term monitoring

MOBILE-HEALTH INTERVENTION FOR SLEEP HYGIENE

This helps users with **goal-creating**, and **self-monitoring**, and also provides **graphical feedback**.

User might feel **overwhelmed** by different functions included as well as needs to use it **continuously** to see the benefits.

THERMAL SENSOR ARRAYS

Ambient in nature and **does not** disrupt sleep.

Relatively **new** and **needs more** research.

CONVERSATIONAL CHATBOT

It provides **more personalised insights** to improve their sleep.

Actions are needed to guide users toward achieving long-term behaviour change. **Over Reliability** on the chatbot could also affect users.

IMPLICATIONS

Personalisation and Adaptation

Students have varied sleep needs and schedules.

Community and Peer Support

Social support can play a significant role in behavioural changes.

Integration of Multiple Interventions

Different sleep aids have the potential to improve sleep quality.

OPPORTUNITIES

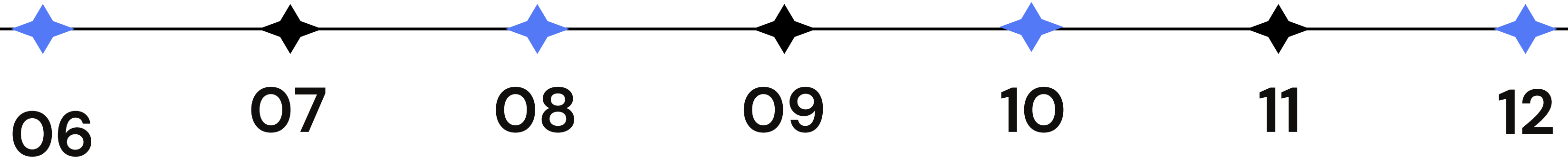
Personalised Sleep Planning Tools

Community-Based Support Systems

Adaptive Sleep Aids

We will use **interviews, diary studies, auto-ethnography** to collect **qualitative** data to gain an understanding of what affects sleep in the students here at UQ. Post analysis, the data will be put into themes.

Making use of the feedback received, we will develop **iterations** that will undergo **multiple cycles of user testing**. Our final iteration will be presented at the trade show.



Using these themes, we will ideate (**Brainstorming, 6 Thinking Hats etc.**) to choose a solution. We will conduct **rapid prototyping with a low-fi prototype** for initial user feedback.

Interview Questions.

Hi, Can you state your name and the program that you're pursuing here at UQ.

What do you think is a good nights sleep ?

(Follow Up) Do You think you have been getting good sleep while at Uni ?

1. What factors do you think most significantly impact your sleep quality as a university student?

(Follow Up). How do academic pressures, such as assignments and exams, influence your sleep patterns?

(Follow Up) What role does technology (e.g., phone use, social media) play in your sleep habits?

How often do you struggle to fall asleep ? (Follow up) Does technology affect your ability to fall asleep ?

2. Can you describe your typical bedtime routine and how it affects your ability to fall asleep?

4. Does your living environment, such as noise levels or roommates, affect your ability to get restful sleep?

Ask Follow up on How it affects their sleep.

8. Can you describe a time when you experienced particularly poor sleep and what you think contributed to it?

or Can you share any challenges you face in maintaining a consistent sleep schedule during the academic year?

6. How do you feel your mental health impacts your sleep quality?

7. Are there any particular strategies or habits you use to try to improve your sleep quality? If so, how effective do you find them?

Reasons

Body Clock

- Late sleep due to assignments.

Environment

No sound No Light

Bad mood

Academic Pressure

- Procrastination

Work Stress

Phone before bed

Cannot sleep past a certain time.

Ideal Time

6-9 hours of sleep

Strategies

Maintain Sleep Schedule

No Technology

Pills

Videos /ASMR content

White Noise

Bed Time Routine

Cold Shower

Eat Food

Wash Face/Brush Teeth

Wash Feet.

Skincare