

HCI/d M.S. Degree Poster Show

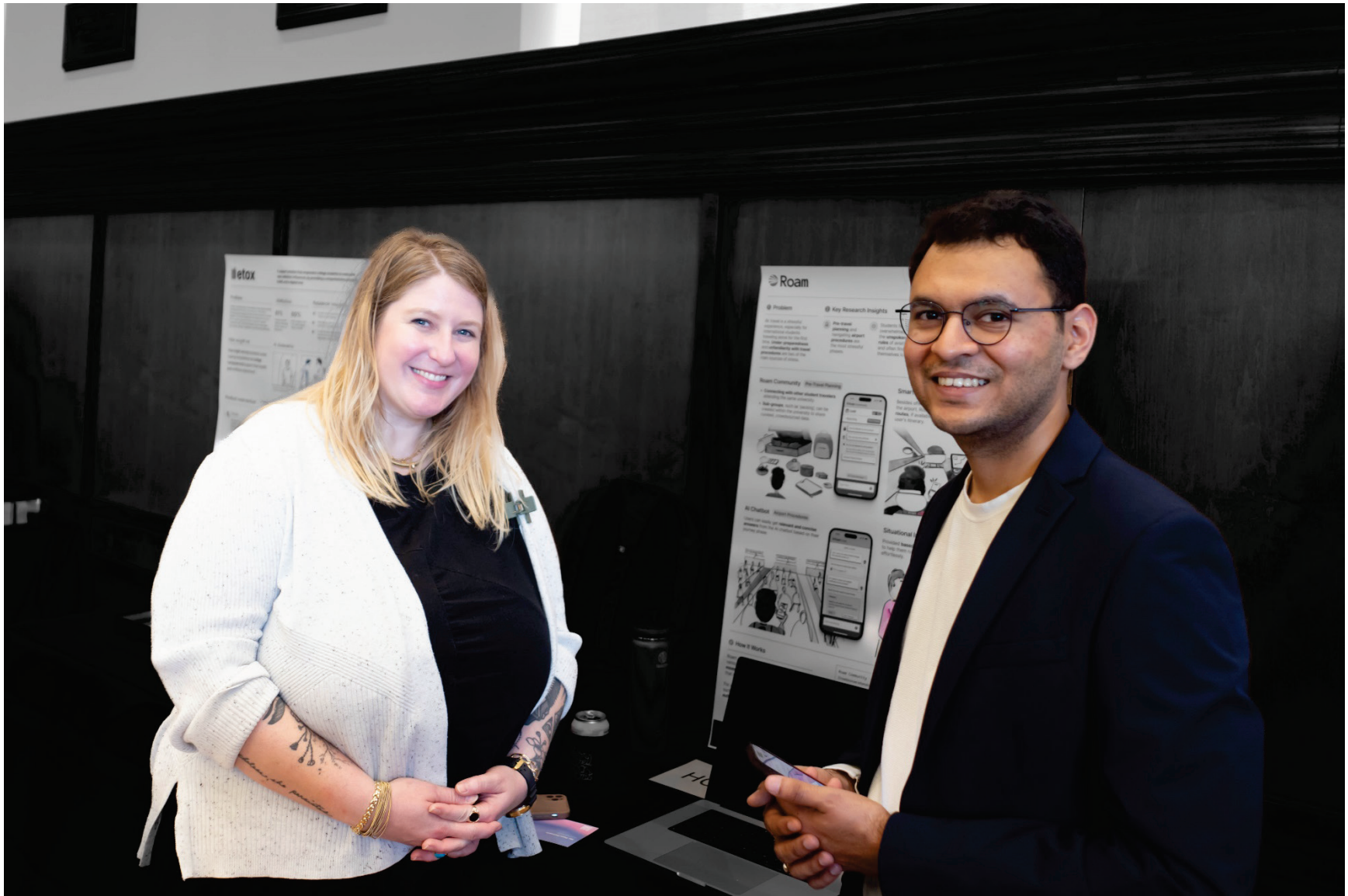
Combined with Informatics B.S. Degree Poster Show

President's Hall

The Eighteenth of April, Two Thousand and Twenty-Four



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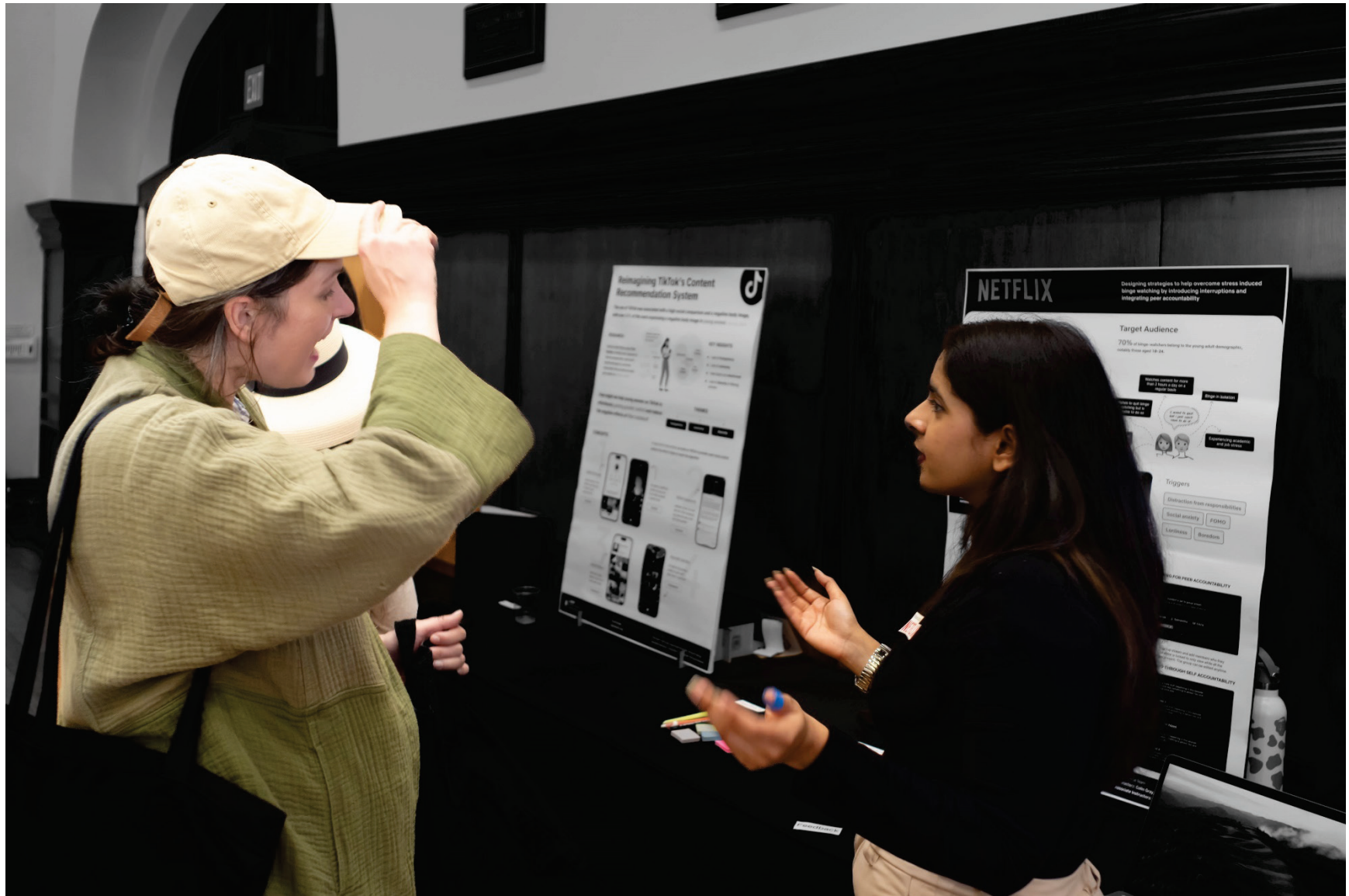


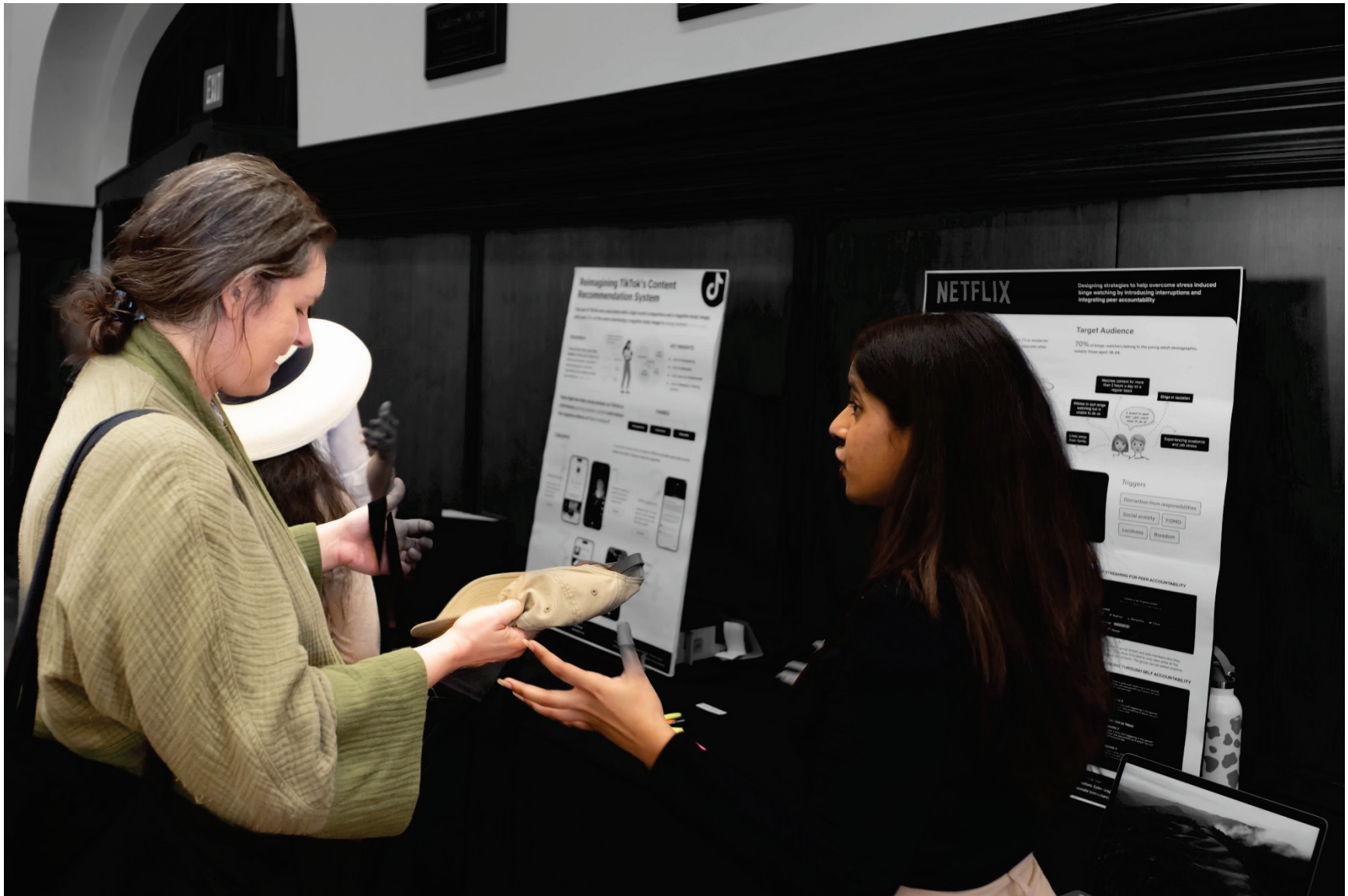






















Decoding Algorithmic Impact

Investigating how Instagram feeds shape self-perception in young females
(Research for Design)



Why is this important?

More than 35% Americans said physical attractiveness is what society values most in women.
According to American Beauty Standards, physically attractive women are white, thin, and blue-eyed.
Women trying to match these standards go through issues like body dissatisfaction, negative self-image and low mental health.
In today's digital world, social media is the main platform for promoting beauty standards therefore, shaping how women perceive themselves.
Instagram being the preferred platform for 54% American women.

Who is affected?

Population: 18-24 year old
Research topic: Instagram users
Research objectives: how social media affects self-perception

Keywords: #Fashion, #Beauty, #Fitness, #Wellness, #Self-care, #BodyPositivity

Research is both needed for an advanced period of time has available. They have available.

Study Procedure (4 weeks, N=10)

Experimental Group: 5 participants were exposed to body-positive content on Instagram reels.
Control Group: 5 participants used their usual Instagram account's reels feed for this study.

Meat Tracking: After every session of scrolling through Instagram reels.
Support: Once every day participants are asked to take a picture of themselves and reflect about their feelings.
Focus Group: Weekly check-in to see if process is going smoothly and iterate experiment if needed.

Results

Subjects generated by experimental group participants showed that exposure to body-positive content in a balanced amount made them feel more positive about their bodies and more confident about themselves subconsciously.

- 01. Interaction metrics (likes, comments) are insufficient for understanding user sentiment.
- 02. Exposing users to positive content gradually led to increased positive emotions.
- 03. Highlighting the potential for subconscious emotional manipulation through curated content.
- 04. Even after intervention the Instagram algorithm continued to promote trending content, introducing negativity.

Conclusion: Curated content being viewed more often than on Reels and Stories. Instagram algorithm is what they see most so they are not actually helping them feel better about themselves in the long run, even though the app's system can trick them into feeling better.
Can we create a social media experience that promotes positive self-perception and exposure to diverse bodies?
Finding the right balance should be explored.

Decoding Algorithmic Impact



A design framework for trust building in remote teams using VR games

Identifying the Challenge

3/5 Remote workers find it tough to trust colleagues they haven't met in person, leading to less effective teamwork.

4/5 Remote workers say that collaborators lack effectiveness without clear objectives.

Opportunity

Virtual icebreakers can be designed to increase trust among remote team members.

VR

Immersive experiences using VR can help build trust among remote team members.

How can we leverage VR games in an intentional way to facilitate meaningful connections that foster trust among remote workers?

A design framework for trust building in remote teams using VR games

The proposed framework, based on trust formation theories, can design the 'flow' of icebreakers and collaborative games, fostering trust and improving collaboration in distributed teams.

STAGE 1 Identify the challenge

STAGE 2 Design the framework

STAGE 3 Implement the framework

STAGE 4 Evaluate the framework

STAGE 5 Iterate the framework

INITIAL LEVEL OF TRUST

TRUST

IMPACT

CHALLENGE

OPPORTUNITY

SOLUTION

CONCLUSION



Easily and immediately enjoy the board game Avalon with more friends

Play Avalon for remote players

How might we use digital elements to help Ling enjoy a better Avalon game experience?

1. Design opportunity

Identify? How can we use digital elements to help Ling enjoy a better Avalon game experience?

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Solution

Automatically dealing & calculating

Reverse game board info

Notification game

Mobile app

Web app

Desktop app

VR app

AR app

AI app

Blockchain app

IoT app

Cloud app

Big data app

Machine learning app

Deep learning app

Neural network app

Genetic algorithm app

Simulated annealing app

Tabu search app

Genetic programming app

Evolutionary computation app

Swarm intelligence app

Particle swarm optimization app

Ant colony optimization app

Genetic algorithm app

Simulated annealing app

Tabu search app

Genetic programming app

Evolutionary computation app

Swarm intelligence app

Particle swarm optimization app

Ant colony optimization app

Optimizing Workout Recovery and Preventing Overtraining

PROBLEM SPACE
Over 50% of gym-goers experience minor strains or injuries due to inadequate recovery.

GOAL
The goal of this project is to help people recover effectively after workouts to prevent injuries and support sustainable fitness journeys.

PARASYMPATHETIC ALTERATIONS
Fatigue, Loss of motivation, Depression, Boredom

SYMPATHETIC ALTERATIONS
Anxiety, Tachycardia, Restlessness, Hypertension, Apathy, Irritability

TRIGGERS OF OVERTRAINING
Monitoring of training, Severe "bunk", Heat injury episode, Altitude exposures, Sleep disturbances, Previous illness

OTHER ALTERATIONS
Anorexia, Lack of mental concentration, Heavy, sore, stiff muscles, Anxiety, Weight loss, Awakened/unrefreshed

THEME OF OPERATION
MOBILITY & FLEXIBILITY, SELF CARE, STABILITY WORK

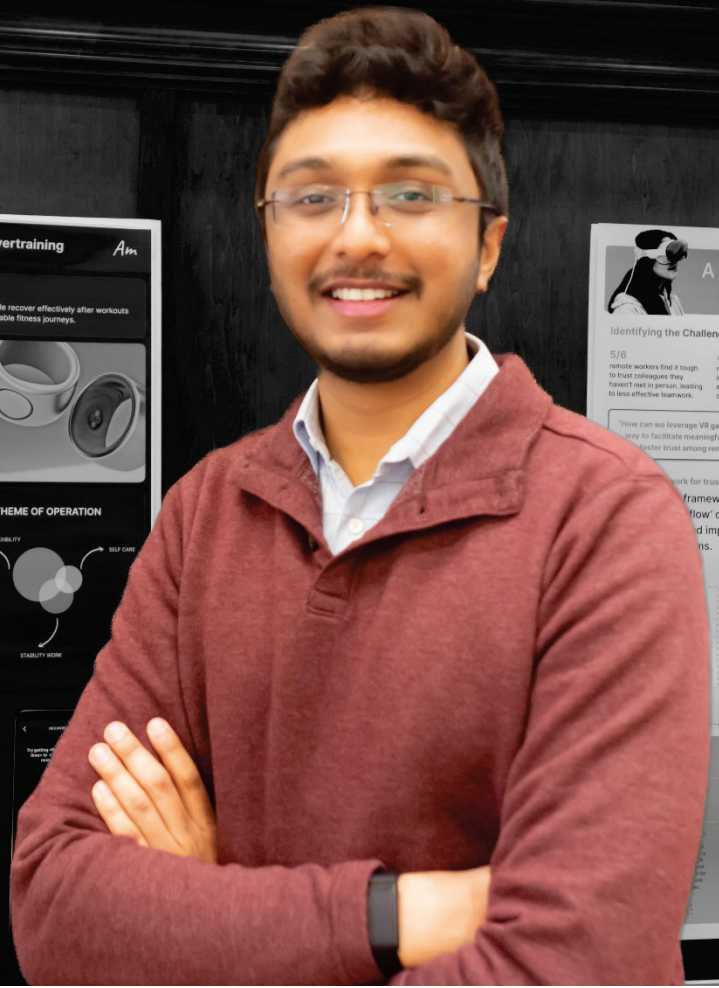
Personalized Suggestion
Performance Estimator
Optimized Suggestion
Alarm Reminder

Biometric & activity indicators
Heart rate variability (HRV), electroencephalogram (EEG), spectral power, used to assess recovery.

Exercise-induced muscle damage (EIMD)
Lead to symptoms like muscle soreness, swelling, and decreased strength.

Balanced Intake
Balanced nutrition, proper rest, and training load management are essential for preventing overtraining.

Overtraining syndrome
Performance decrements, mood changes, and potential long-term health consequences.



A design framework for trust building in remote teams using VR games

Identifying the Challenge
5/6 remote workers find it tough to trust colleagues they haven't met in person, leading to less effective teamwork.

Opportunity
4/6 remote workers say that icebreakers lack effectiveness without clear objectives.

Why VR?
Virtual icebreakers can be designed to foster presence and connections among remote team members.

V5
Immersive environments could simulate being in the same room, enhancing connections and collaboration.

How can we leverage VR games in an intentional way to facilitate meaningful connections that foster trust among remote workers?

Design framework for trust building in remote teams using VR games
A framework, based on trust formation theories, the flow of icebreakers and collaborative games, and improving collaboration.

STAGE 2
ICE BREAKERS (collaborative games)

STAGE 3
ICE BREAKERS (collaborative games)

STAGE 4
ICE BREAKERS (collaborative games)

EXPECTED LEVEL OF TRUST AT THE END OF THE SESSION

INTRODUCTION
An engaging introduction to establish a safe and trusting environment for collaboration.

GAME
An engaging game that builds trust through collaboration and communication.

DEBRIEFING
A structured debriefing session to reflect on the experience and reinforce trust-building behaviors.

CONCLUSION
A closing statement that summarizes the key takeaways and encourages continued trust-building efforts.

References:
Bass, D. (2011). *Trust: The New Competitive Advantage*. Harper Business.
Bridgman, G. (2019). *Trust: The Power of Trust in Business*. Harper Business.
Bridgman, G. (2019). *Trust: The Power of Trust in Business*. Harper Business.



Raising awareness about ethically sourced food at grocery stores

Why is this important?

72% People practice transparency in choosing food brands at stores.

The majority of customers have consistently low knowledge about food production and source farming. Easy access to information is needed to help them make more informed choices. However, labels have a difficult time providing information in ways that are accessible enough to be clear, accurate, and comprehensive at the same time.

Learning activities

In order to make and learn more about source's food experiences, users need to look deeper into user performed customer activities.

Design Solution

Scenario 1: Customer uses a mobile app to scan a QR code on an egg carton to get more information about the source of the eggs.

Scenario 2: Customer uses a kiosk and interacts with it to find relevant information.

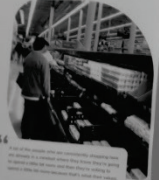
Customer can call staff to learn more about food.

Identified Problem

- Overload of Options:** The sheer number of eggs offered can be difficult for customers to handle, which makes it challenging to make informed decisions quickly.
- Lack of Transparency:** Difficulty in verifying claims on farming methods, freshness of eggs, or nutritional value made on packaging.
- Accessibility Issues:** Information may not be easily accessible to all customers or those who do not speak the primary language used on packaging.

Insights

- Fresh living consultations
- Food type
- Use of numbers or symbols
- Verified certifications



HCI 33



Mood Wallet

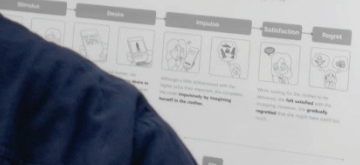
Mindful digital wallet and payment for online impulsive shoppers

Project Scope

- Shopping behavior: Impulsive shoppers who feel stressed
- During and after shopping: Focusing on emotional change

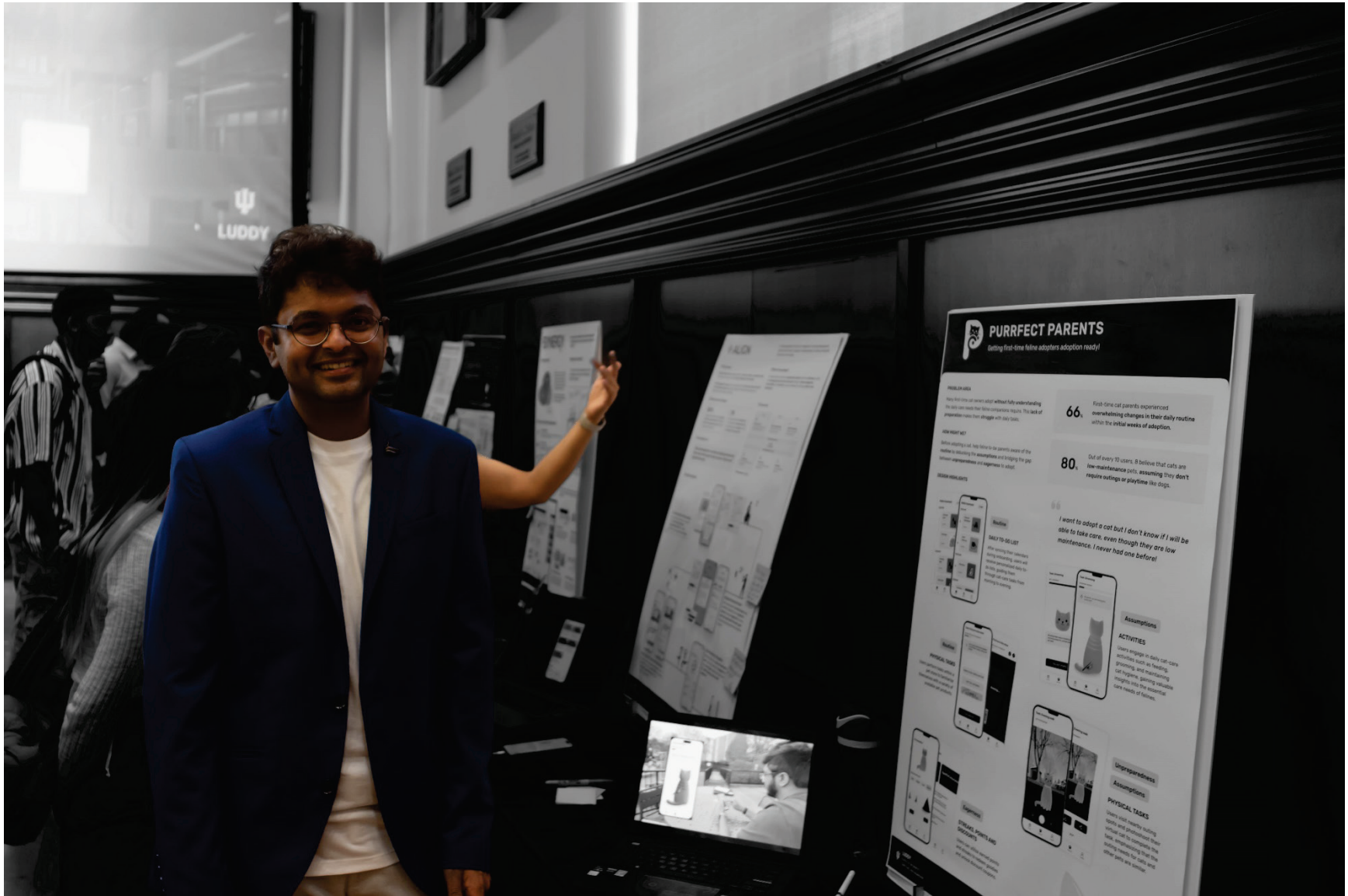
User Goals

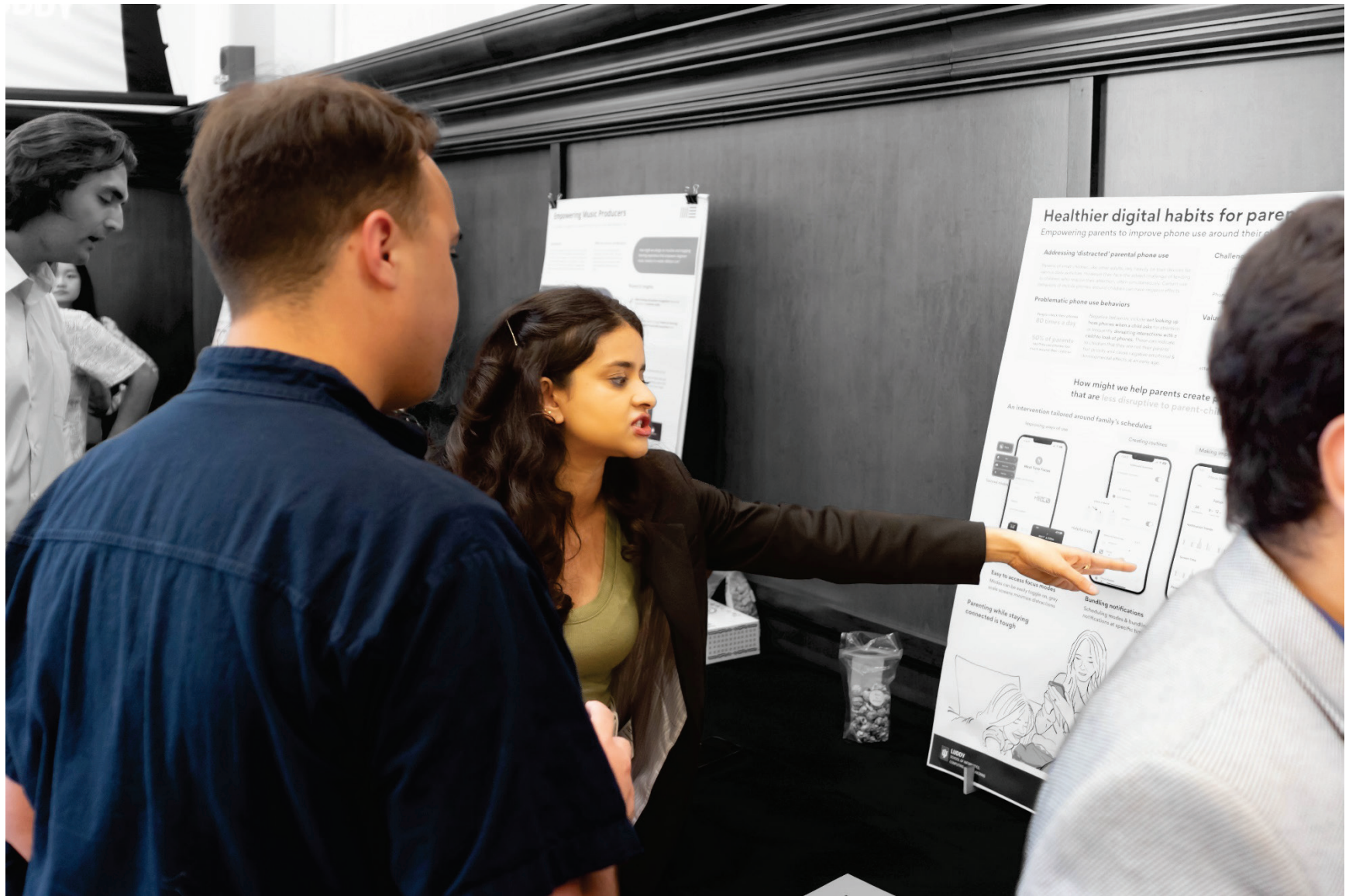
- Negative Feelings: **Not regret the purchase decisions** even if users made impulsive or unimpulsive
- Appropriate Decisions: **Make appropriate decisions** between impulsive and unimpulsive purchases
- Mindfulness: **Consider their emotion and finance** in shopping journey



Using History and Reflection

5





Healthier digital habits for parents

Empowering parents to improve phone use around their children

Addressing 'distractions' parental phone use

Parents often find themselves checking their phones more frequently when their children are around. This can be a challenge because it's hard to stay focused on the child when the phone is in your hand.

Problematic phone use behaviors

Parents often find themselves checking their phones more frequently when their children are around. This can be a challenge because it's hard to stay focused on the child when the phone is in your hand.

80% of parents check their phones more frequently when their children are around.

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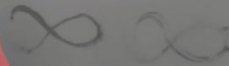
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LUCY
LUCY



Draw Your Breath

Instructions
Put on the headphones to immerse yourself in the experience.
Follow the animated breathing pattern on the screen to familiarize yourself with the rhythm.
When you feel ready, take a deep breath in and begin drawing on the panel.
The breathing pattern will guide the movement of the drawing tool, syncing each inhale and exhale with the strokes.
Take your time and breathe as you create your drawing.
After you finish, take a moment to reflect on how you feel.

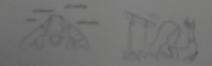


ME TIME MOMENT

Alleviate stress through interaction design of "small moments" for gaining

In today's fast-paced world, young adults face emotional distress with increasing frequency. Stressors such as academics and social interactions often overwhelm our senses, leaving us feeling overwhelmed and unable to focus. Through interactive design, we can create "small moments" for gaining

Opportunity: Offering a few minutes of practice to



Upper stress
Stressors that are perceived as more threatening and more difficult to control.

Lower stress
Stressors that are perceived as less threatening and more controllable.

Seeking relief
The need to find ways to manage stress and regain control.

Opportunity
Offering a few minutes of practice to



Draw along
Draw with each stroke to

Articles
Read about the benefits of

QR Code
Scan to learn more

Library
Check out the book





