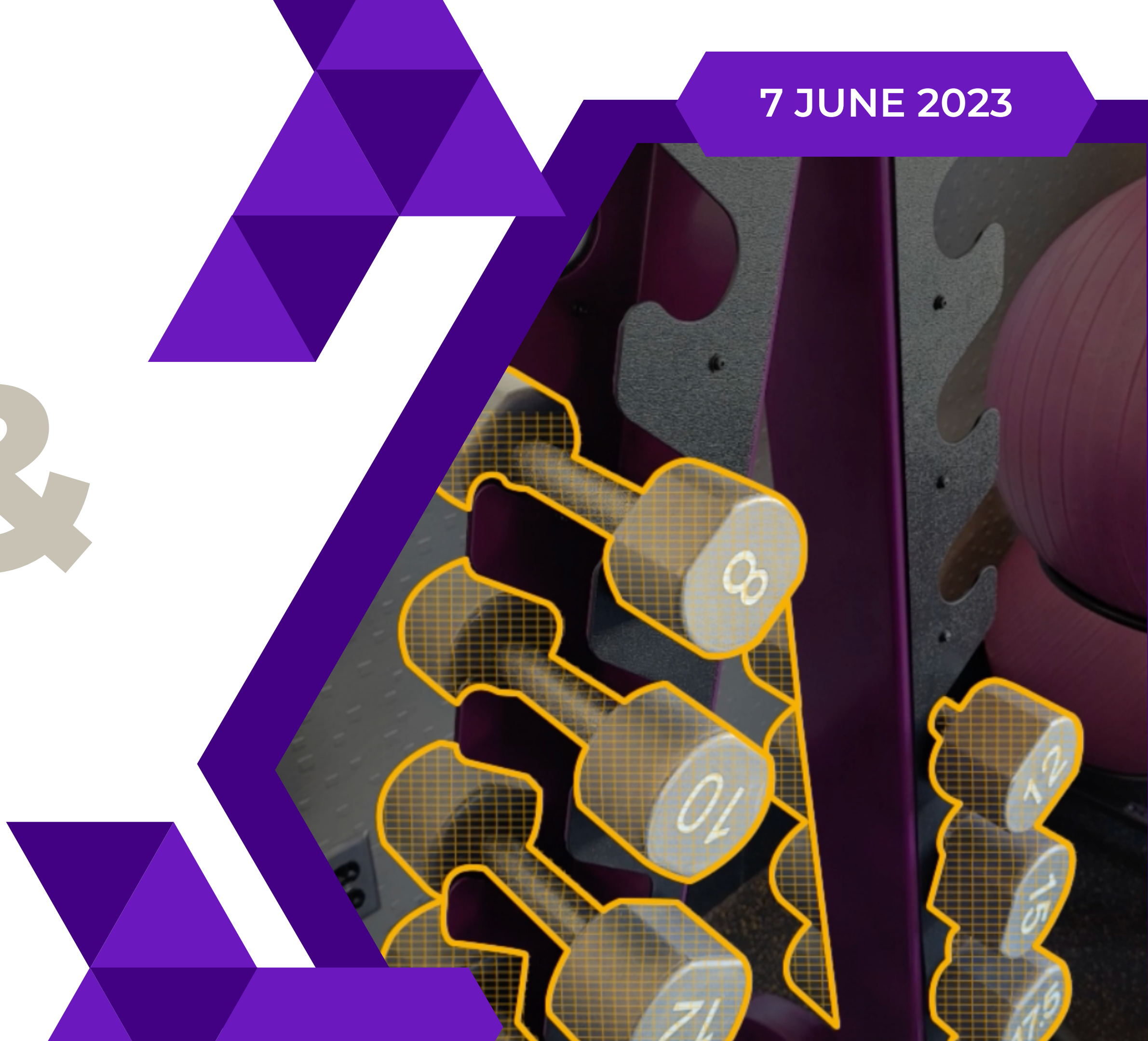7 JUNE 2023

FITNESS &

AUGMENTED
REALITY

Matthew Lawrence Christy
Sai Vandana Srinivasan

When you try to use a machine at the gym and notice that people are staring.

GYM + INTIMIDATION = "GYMTIMIDATION"

Feelings of intimidation and anxiety while performing exercises in public spaces.

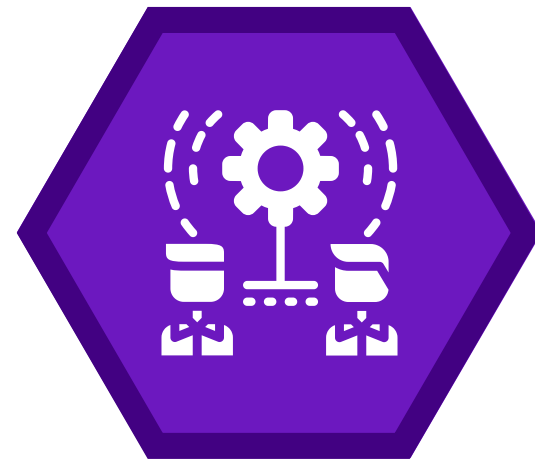# AUGMENTED REALITY ("AR")

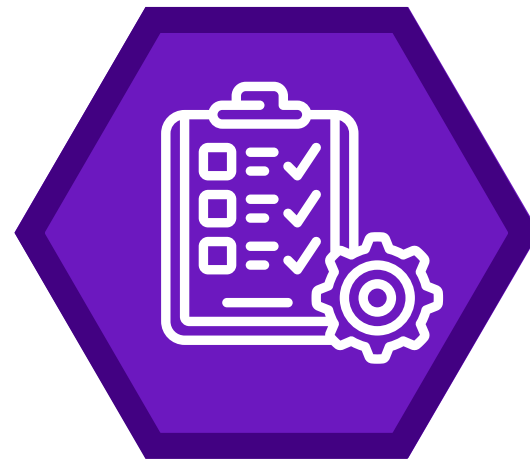The integration of digital information within a person's environment in real time.
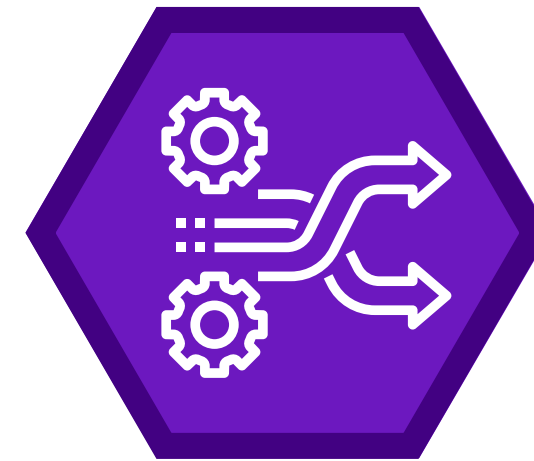
TODAY'S AGENDA

Research of "Gymtimidation"

Design Ideation & Prototyping

Prototype Testing & Summary

Future Designs

Overall Thoughts

RESEARCH OF "GYMTIMIDATION"

DETERMINING RESEARCH METHODS

INTERVIEWS

- Hard to get people to commit.
- The gym is not a place for interviewing.
- Less likely to open up.

SURVEYS - POSTERS & SOCIAL MEDIA

- Answer at their own pace during their own time.
- Anonymity results in the likelihood of people saying more.

RESEARCH OF "GYMTIMIDATION"

CODING THE SURVEY

FIND COMMON THEMES

Used a Miro board to sort Survey Data:

- Participants felt that gymtimidation resulted from:
  - Self-consciousness
  - Anxiety
  - Lack of knowledge

- **74%** of participants felt they would have a better experience through **more knowledge of exercises and equipment**
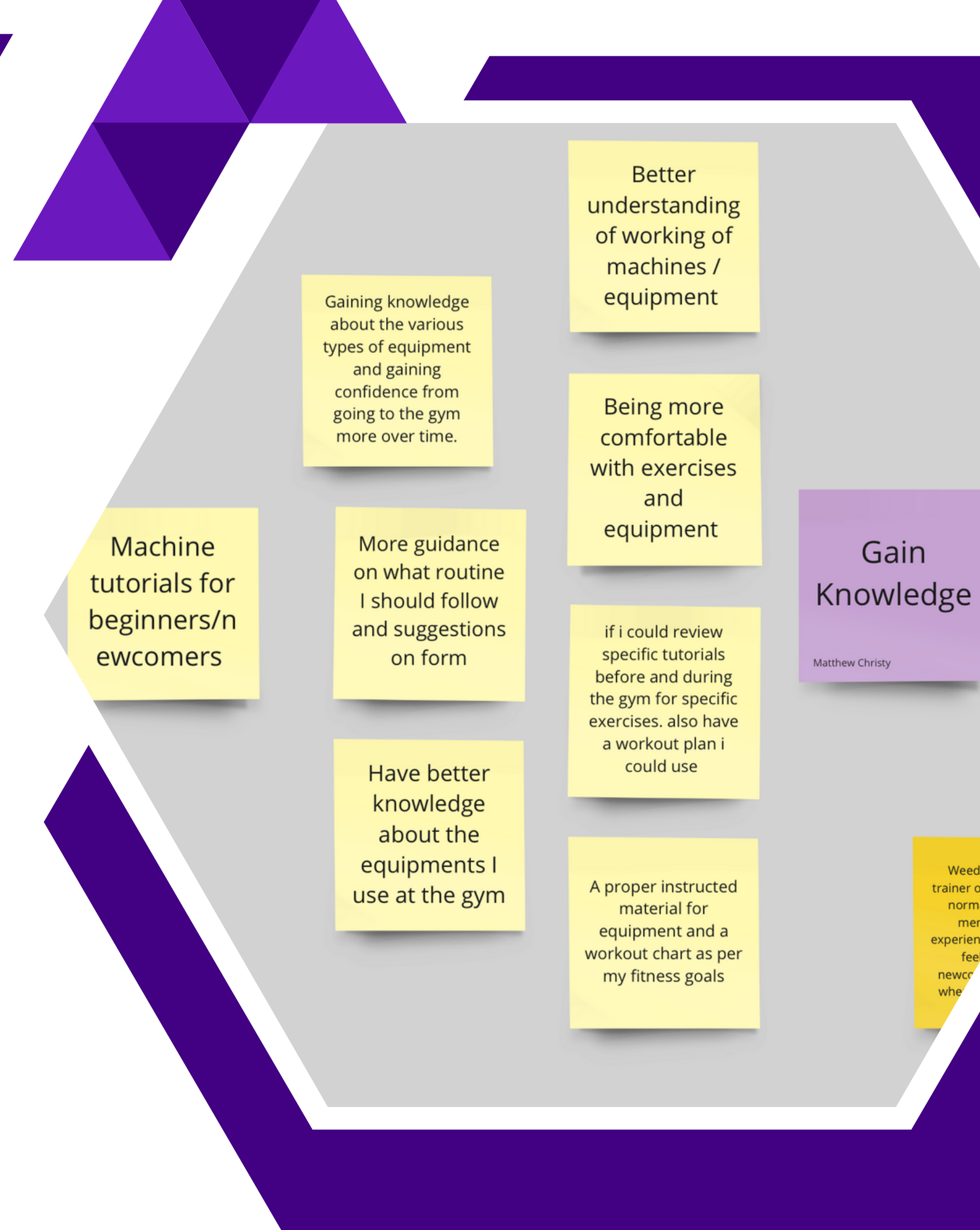
RESEARCH OF "GYMTIMIDATION"

DEFINING USER SEGMENTS & AREA OF FOCUS

USER SEGMENTS

- Independent Exercisers
- Fitness Gurus
- Fitness Help Seekers

AREA OF FOCUS

- Use AR to help "**fitness help seekers**" with gaining more knowledge of exercises and equipment.
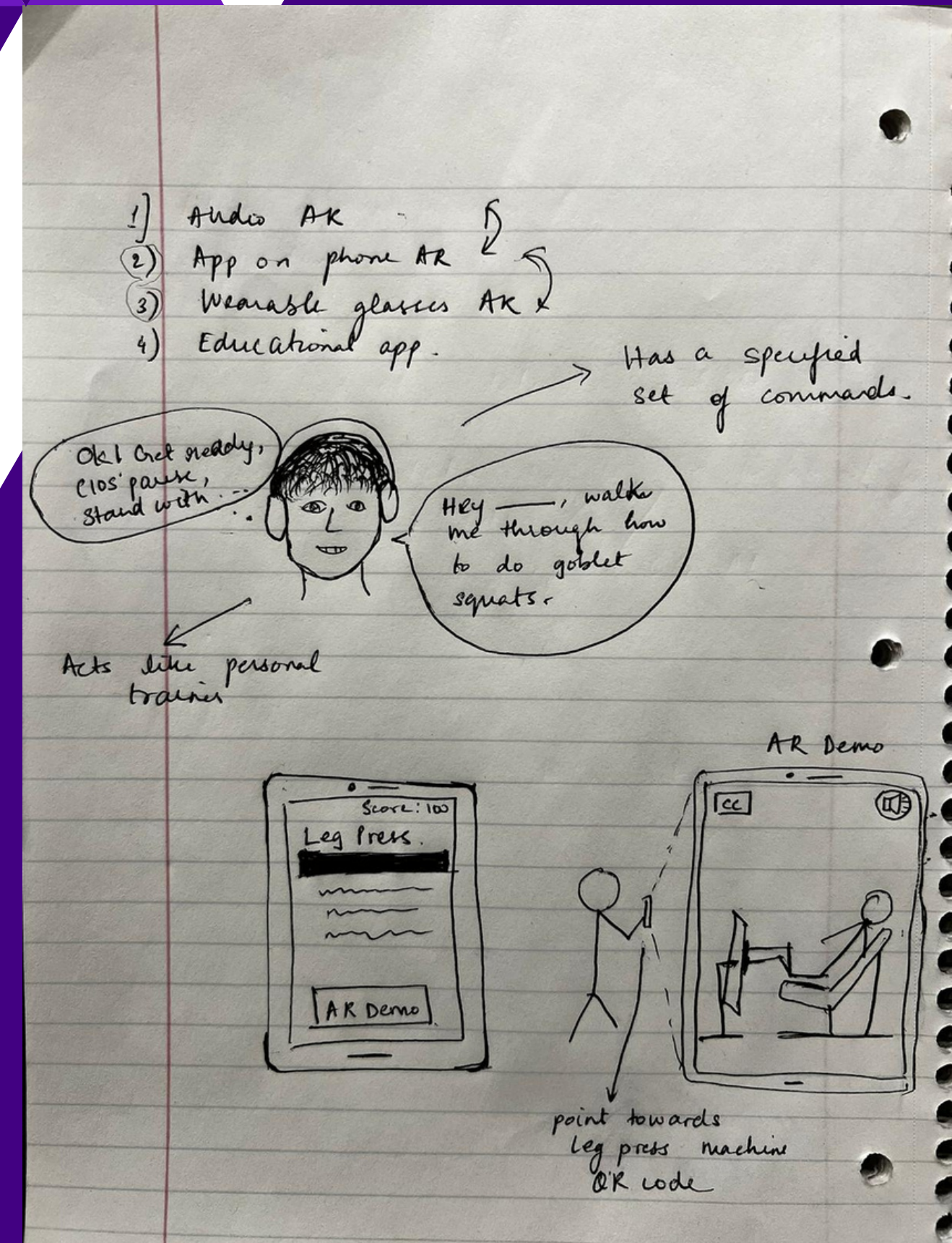
DESIGN IDEATION & PROTOTYPING

IDEATION

DESIGNS

- Educational App
- Educational App Integrated with AR
- Audio AR
- Audio and Video AR via wearables (glasses)

CONSIDERATIONS

- Is AR a viable solution to gymtimidation?
- Should we focus on wearables?

DESIGN IDEATION & PROTOTYPING

MARKET RESEARCH

EXISTING APPLICATION FEATURES

- Gamification and Leaderboards.
- Progress Tracking and Goal Setting.
- Motivation Messaging.
- Real-time exercise data.
- Visual and audible cues for exercises.
- Heads Up Display (HUD) technologies in the case of AR.

DESIGN IDEATION & PROTOTYPING

PROPOSED PROTOTYPE

APP AND WEARABLE AR COMBO

- AR utilizes HUD and audible cues for a personalized experience.
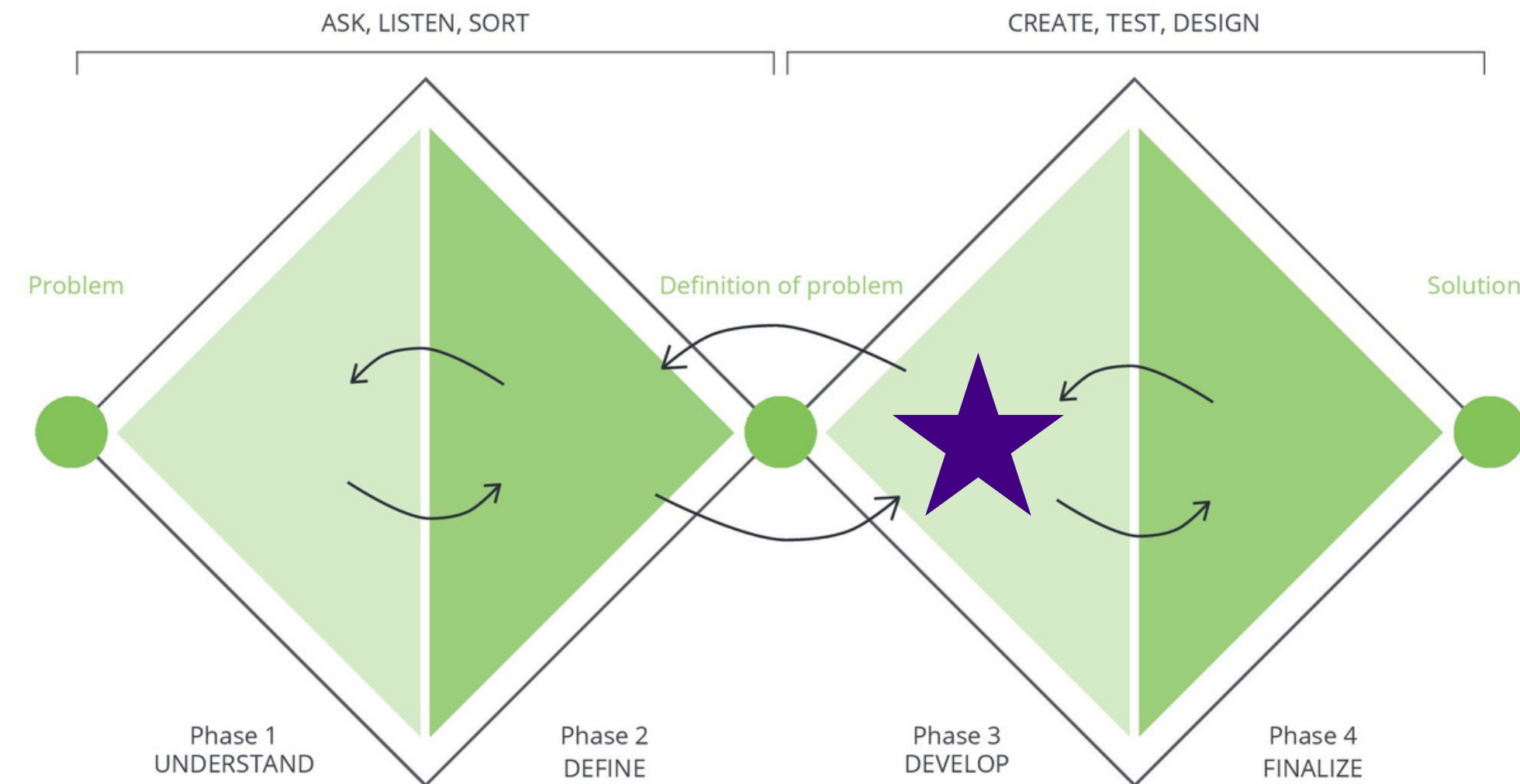
- Hands free.

DESIGN IDEATION & PROTOTYPING

THE PIVOT

RETHINKING THE PROTOTYPE

- The prototype should require minimal resources.

- The prototype should provide a personalized training experience to increase knowledge and confidence.

- The prototype should be tested and analyzed by the end of capstone.

THE DOUBLE DIAMOND PROCESS
UX DESIGN

ASK, LISTEN, SORT

CREATE, TEST, DESIGN

Problem

Definition of problem

Solution

Phase 1
UNDERSTAND

Phase 2
DEFINE

Phase 3
DEVELOP

Phase 4
FINALIZE

TestingTim

NEW PROTOTYPE DESIGN - WOZ

PROTOTYPE DESIGN PROCESS

- Storyboard
- UI in Figma
- Wizard of Oz **Video Prototype** in Premiere

FOLLOW-UP SURVEY - EMAIL

- Sent survey to participants from first survey.
- 8 Questions - Qualitative/Quantitative.
- Used similar coding technique as our first survey in Miro.

PROTOTYPE TESTING & SUMMARY
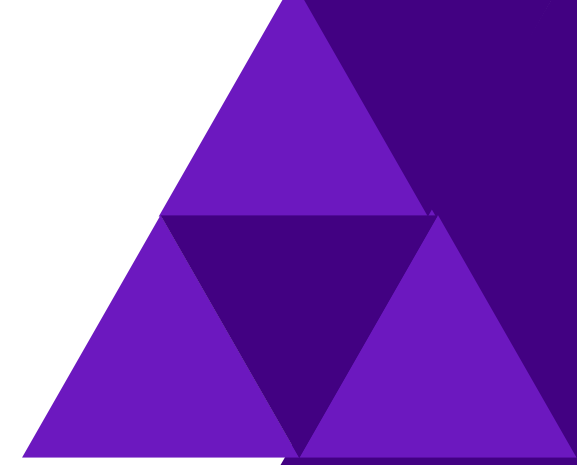
FINDINGS

SURVEY DATA:

- 89.5% of participants felt like this app would help with gymtimidation.

- 55% of participants said they would like integration with wearables.

- App recommendations and features.

Survey data demonstrates AR is a viable solution for gymtimidation.

FUTURE DESIGNS

FEATURE PRIORITIZATION

Feature	Importance			
	Low	Medium	High	Already Included
Music	X			
Nutrition	X			
Biometrics				X
Form - Moditifcations based on Capabilities			X	
Form - Realtime Feedback	X			
Building Custom Workouts			X	
Beginner Routines			X	
Beginner Weight Recommendations			X	
Non-machine workouts (Alternative)		X		
Interactive Interface				X
Voice Overlay Toggle (On/Off)			X	
Animation instead of Motion Video			X	
Gender Neutral Selection			X	
Demotiviation due to Height/Weight Setup	X			

POSSIBLE CHANGES FOR FUTURE PROTOTYPE ITERATIONS:

- Interactive audio fitness guide (RFID)
- AR using gym mirrors
- Form correcting machine-integrated camera

OVERALL THOUGHTS

CAPSTONE

TIME FLIES:

- Second round of ideation.
- Create app for new prototype.

PROJECT TIMELINE AND RESEARCH

- Gantt chart/project enforced time management.
- Utilized appropriate research methods.

PROTOTYPING

- Pivots lead to epiphanies.

trainAR Team

THANK YOU
FOR YOUR ATTENTION

Matt & Vandana