



BuddyBuilder



The Team



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Overview

1. Our story

- a. *The need*
- b. *Existing solutions*
- c. *The mission*

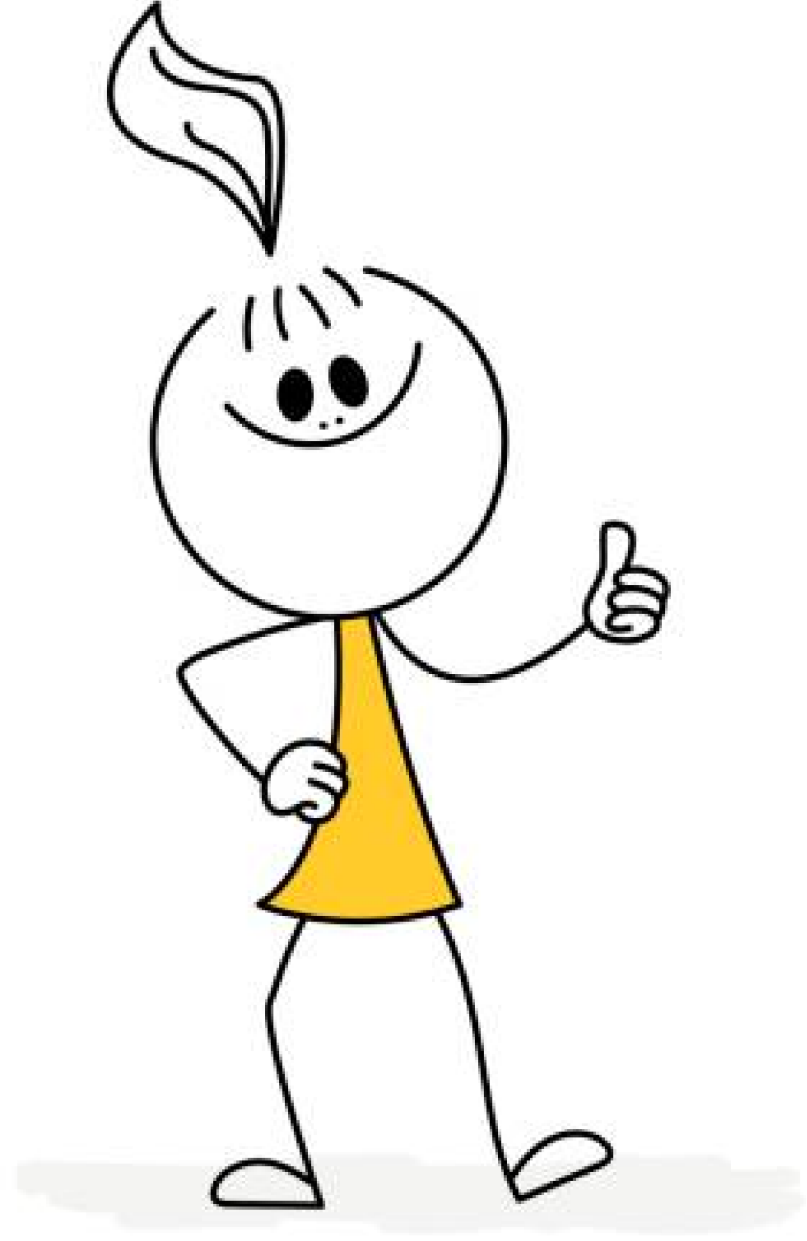
2. How we solved it

- a. *Implementation*
- b. *Design Process*
- c. *Final Prototype*

3. Looking forward

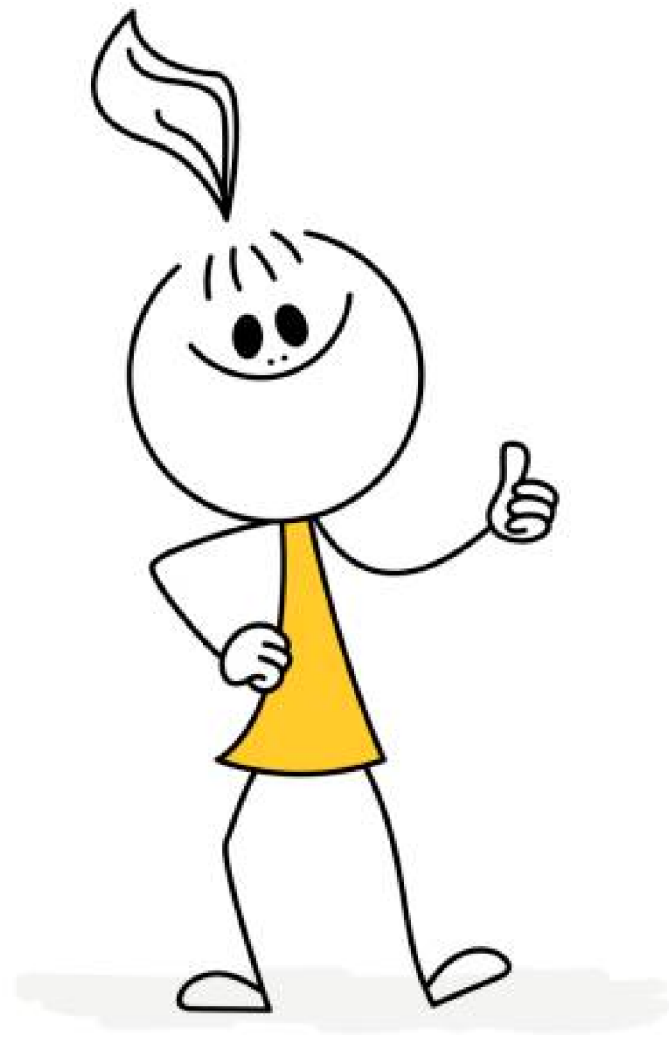
- a. *Key contributions*
- b. *Next steps*

Our Story



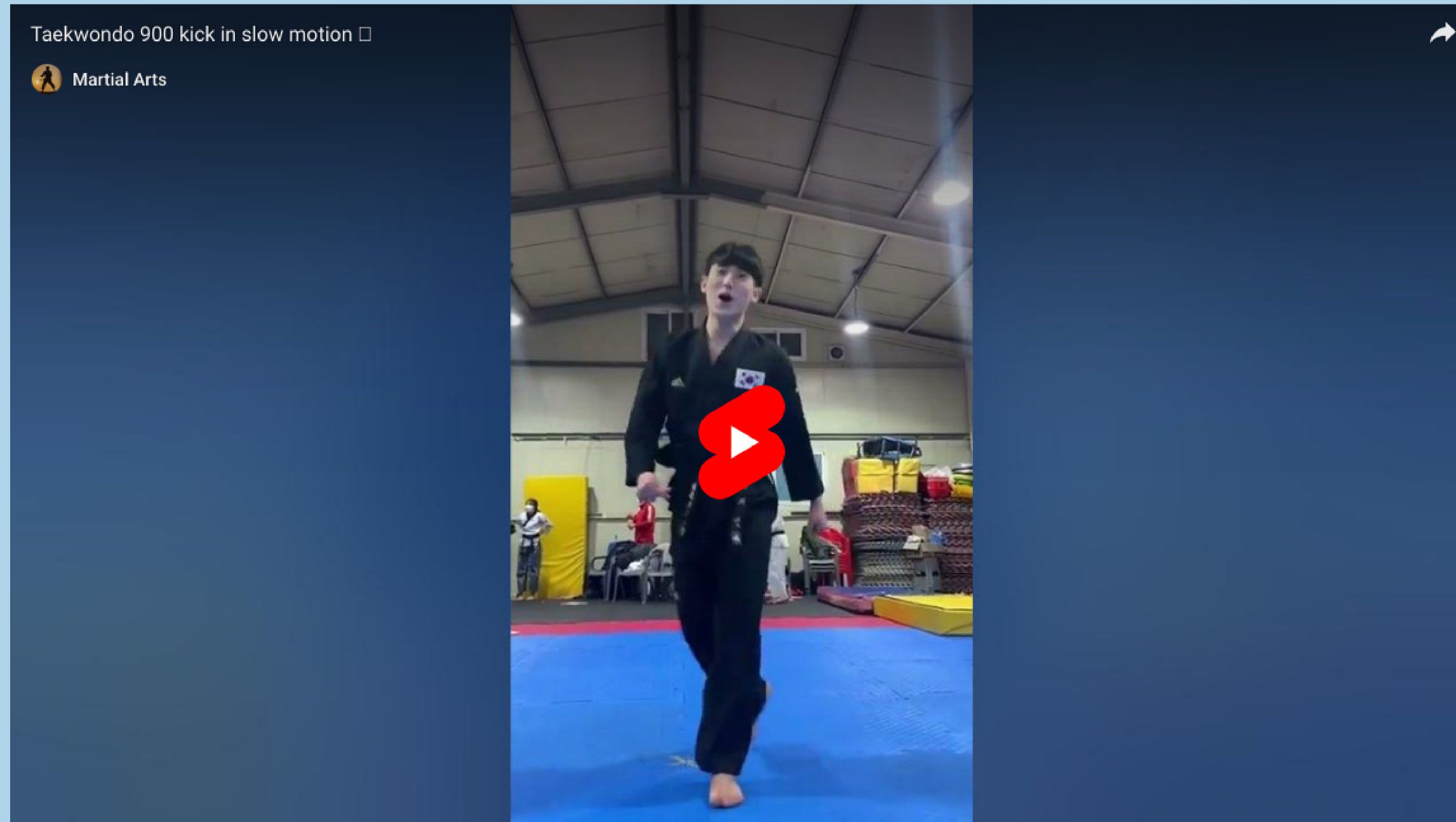
Meet Jenna 

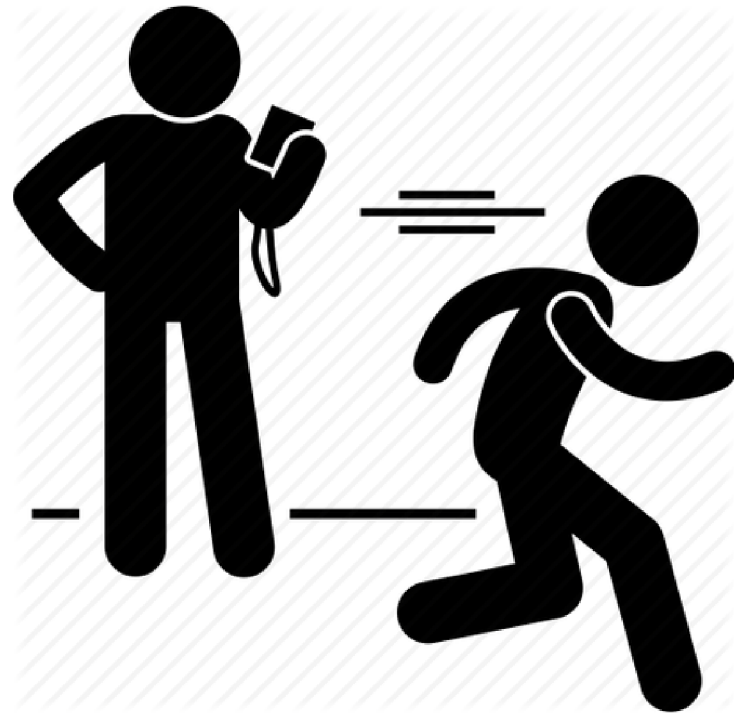
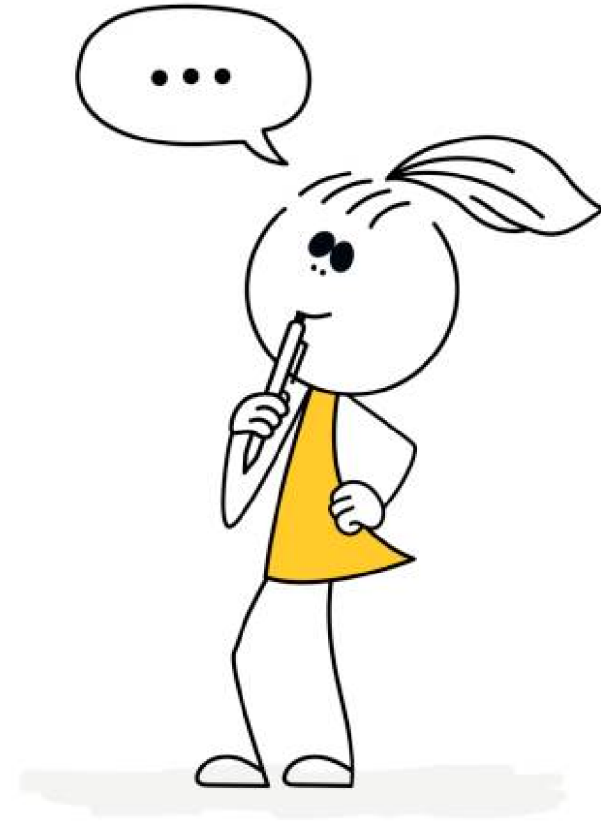
Jenna is...



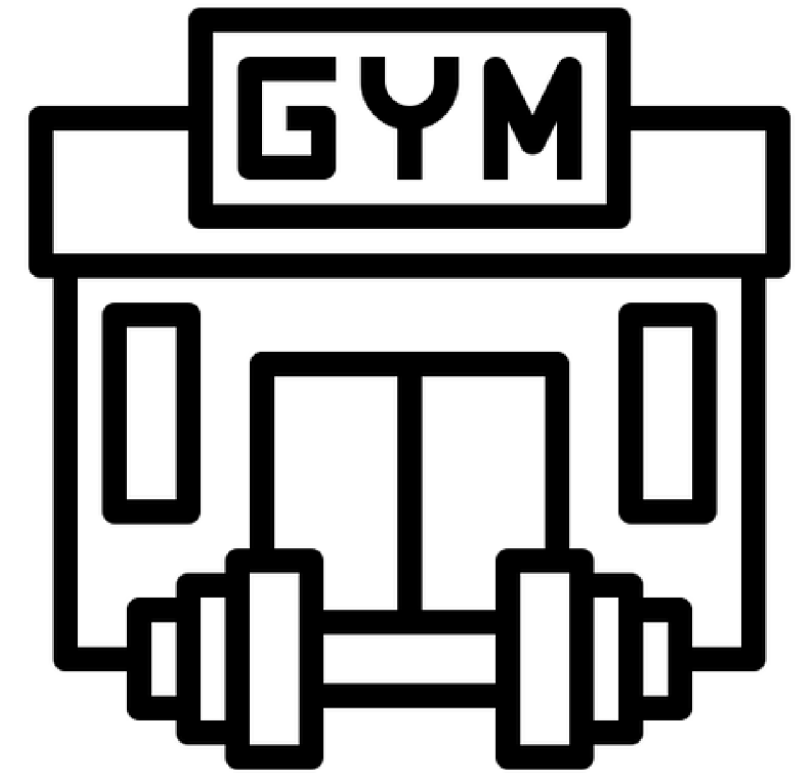
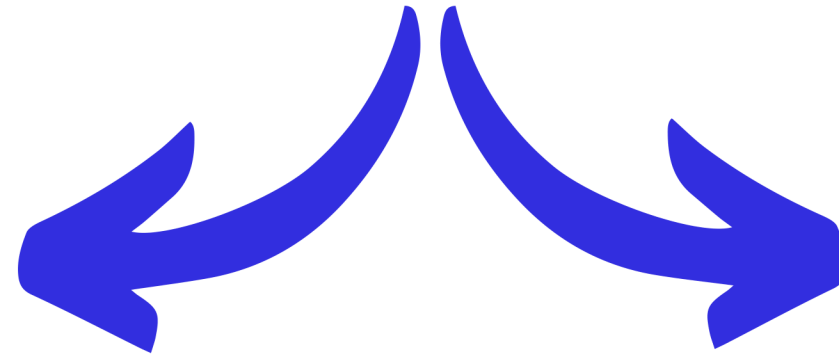
- Competitive Taekwondo athlete
- Improve specific spinning kick
- No biomechanics knowledge

The kick in question:





Physical Trainer



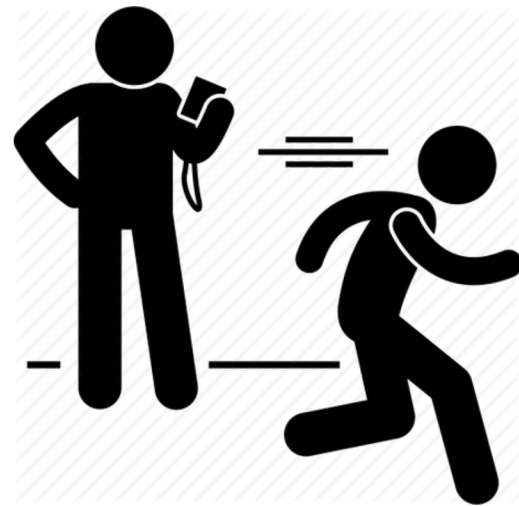
Gym

Physical Trainer



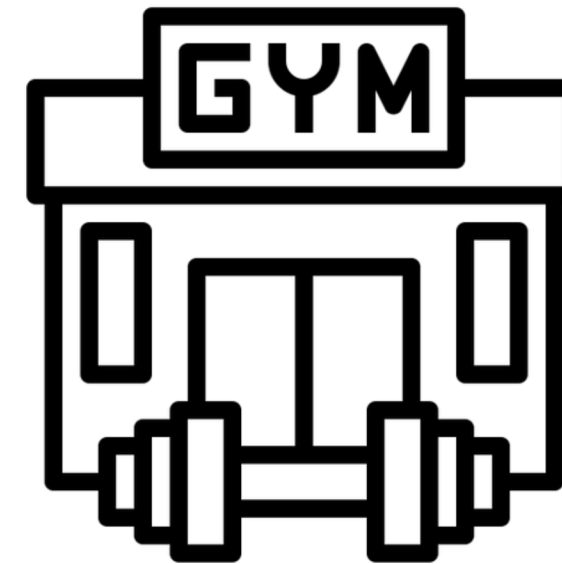
- Extremely expensive
- Difficult for niche sports

Physical Trainer



- Extremely expensive
- Difficult for niche sports

Gym



- Lack of expertise
- Zero injury adaptability



How might we create something that's as **easily accessible** as a gym but with the **knowledge and personalization** of PT?



The Mission

Improve the accessibility of physical training resources for student athletes in niche sports

How do we plan on doing this?

Solution

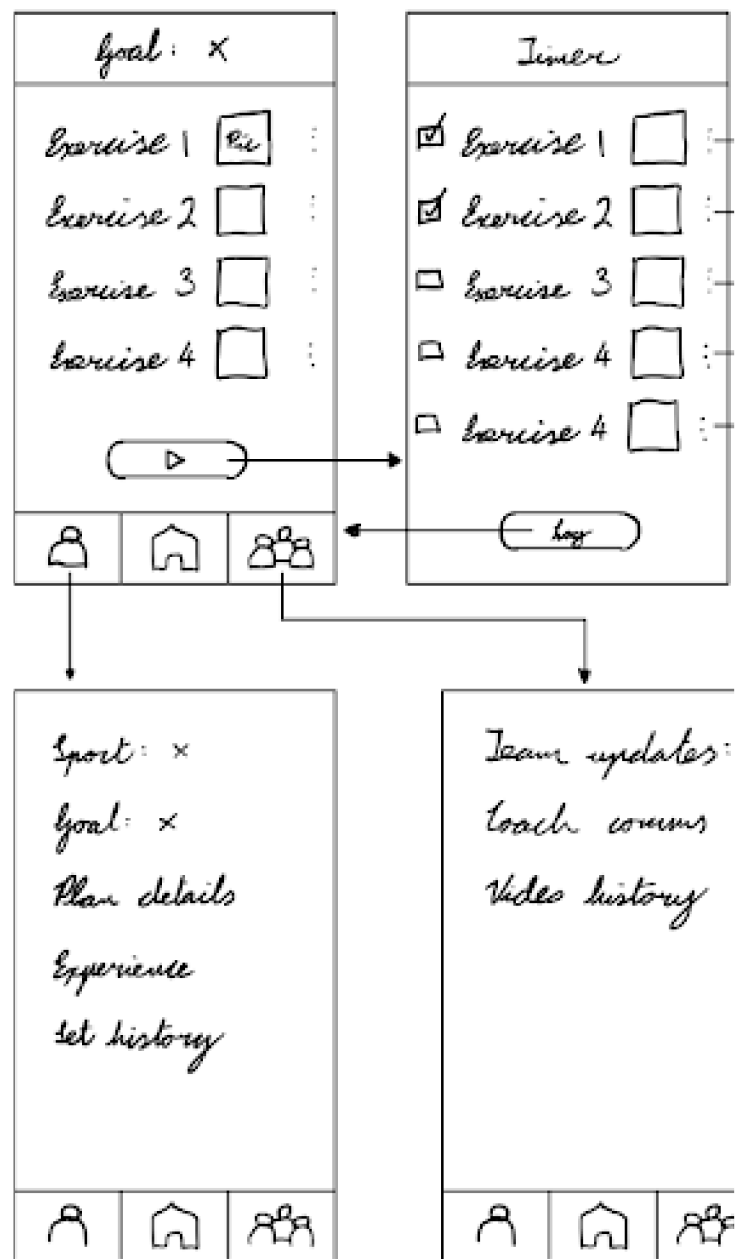
CV model that analyzes exercise video input and highlights muscles utilized

The image displays three sequential screenshots of a fitness application interface. The first screenshot, titled 'Wednesday 06/07', shows 'Exercise Targets' (Stability Stance, Attack Stance, Vertical Kick) and 'Today's Workout' (Front Squat, Side Lunge, Split Squat) with a 'Start Workout' button. The second screenshot, titled 'Workout', shows 'Current Exercise' (Front Squat) with a video player and a list of sets: 1 (8 reps, 180 lbs, checked), 2 (8 reps, 180 lbs, checked), and 3 (8 reps, 180 lbs, unchecked). Below is 'Up Next' (Side Lunge, 30 lbs). The third screenshot, titled 'Confirm', shows a video of a 'Poomsae Kick' with blue circles highlighting the 'Adductors', 'Quads', and 'Abs' muscles. Text below the video reads: 'BuddyBuilder identified: Poomsae Kick and the following muscle groups: 1. Adductors, 2. Abs, 3. Quads'. Buttons for 'Regenerate' and 'Generate Exercises' are visible. All three screenshots have a chat input field at the bottom with the text 'Can I help you with anything?' and a microphone icon.

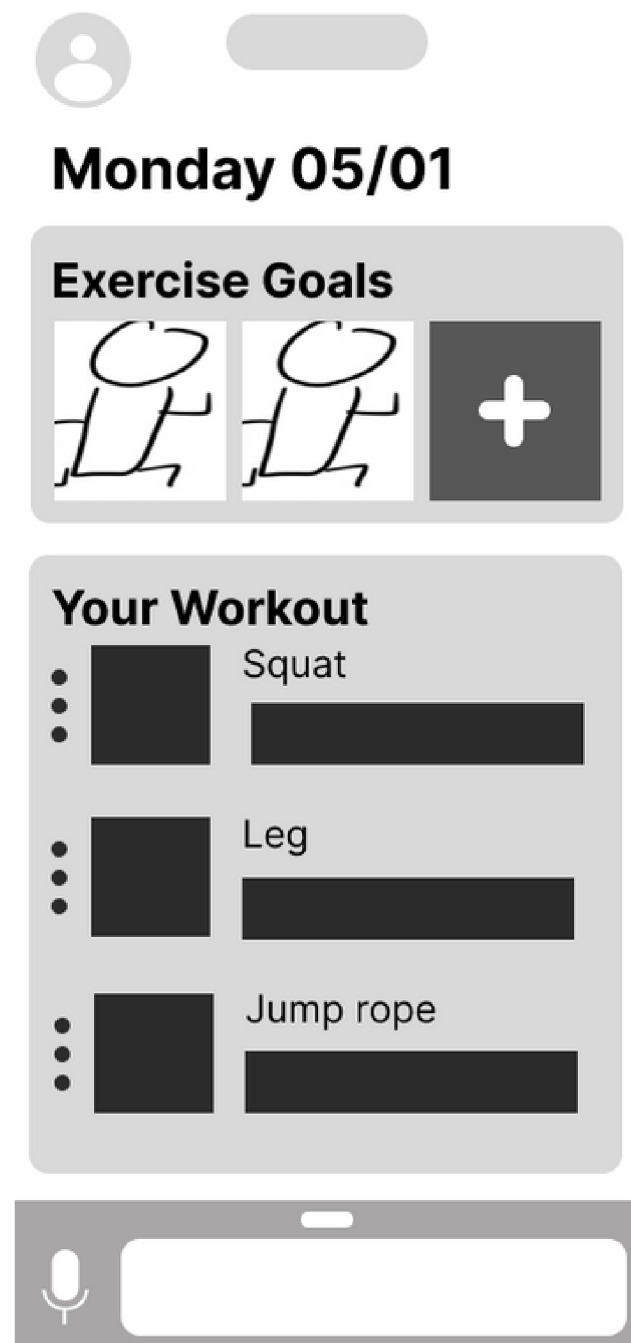
+

LLM that produces personalized workouts that target highlighted muscles

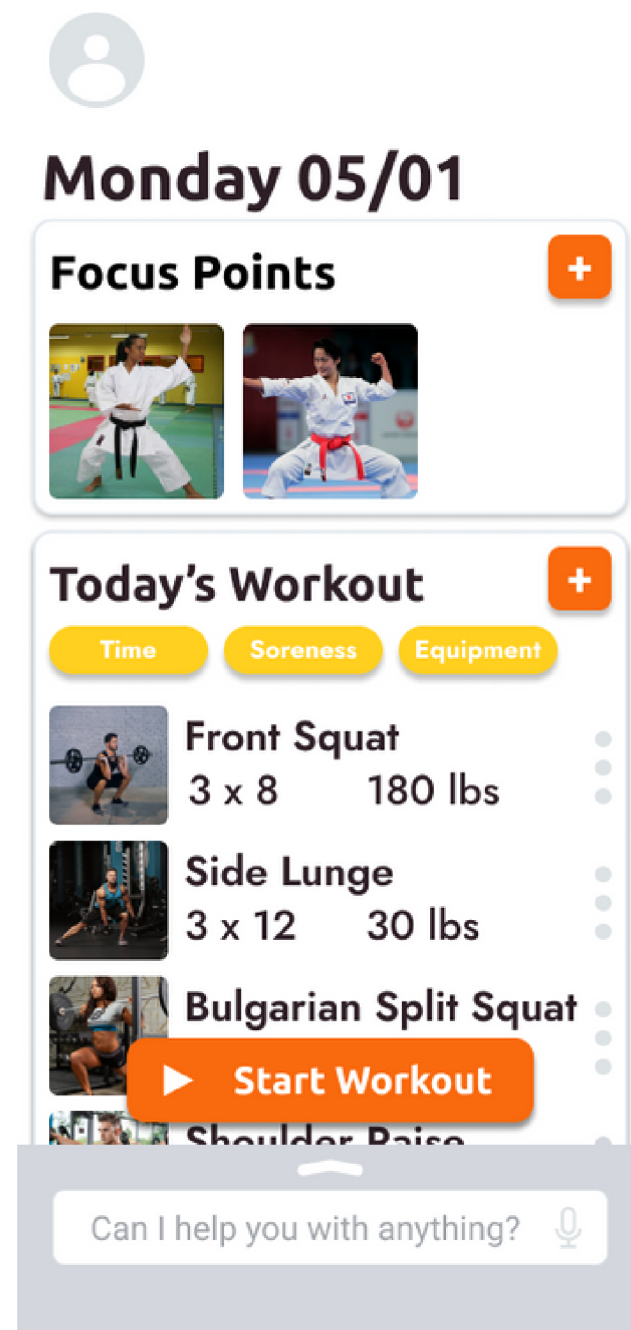
Design Process



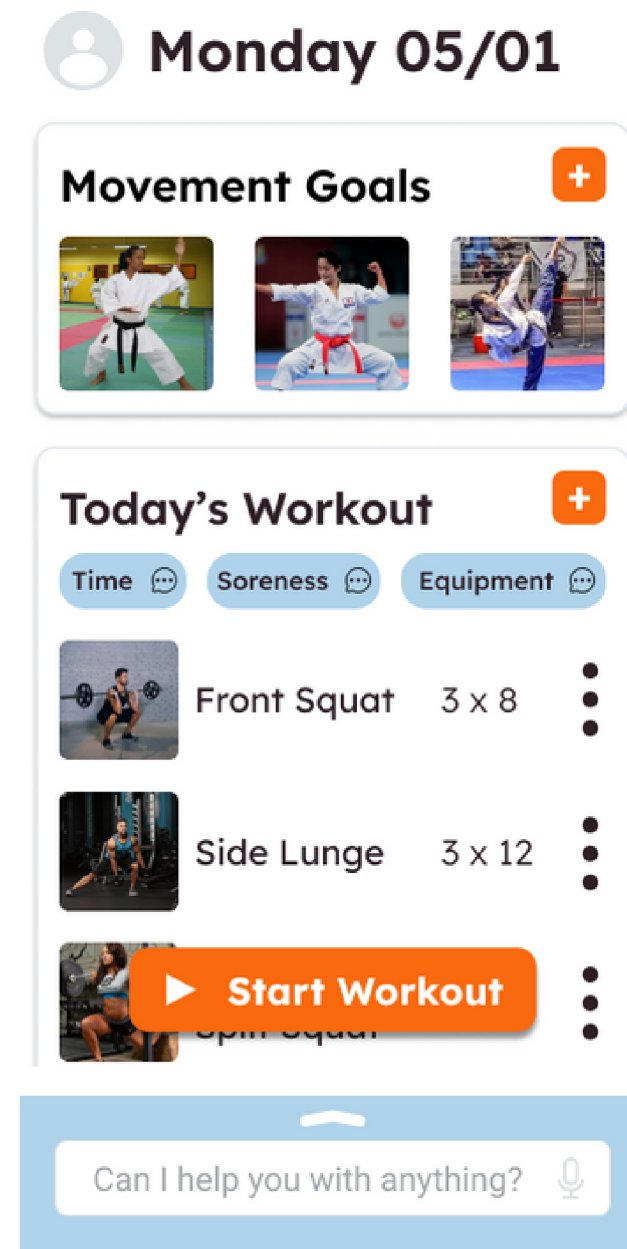
sketches



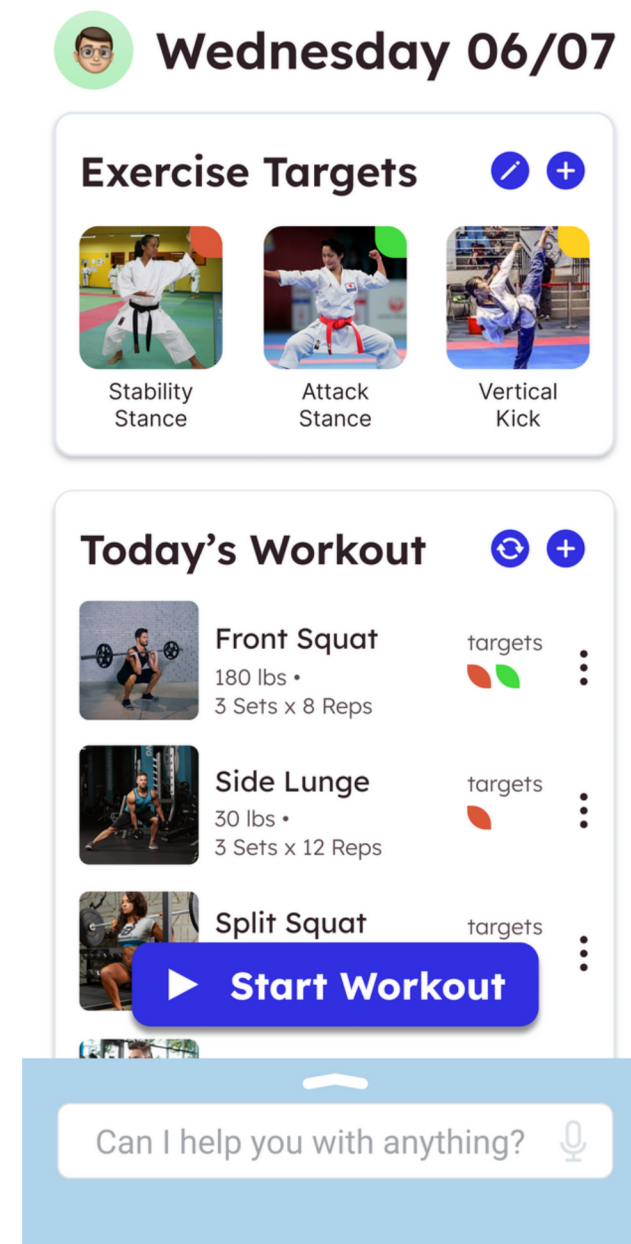
lofi



med-fi v1



med-fi v2

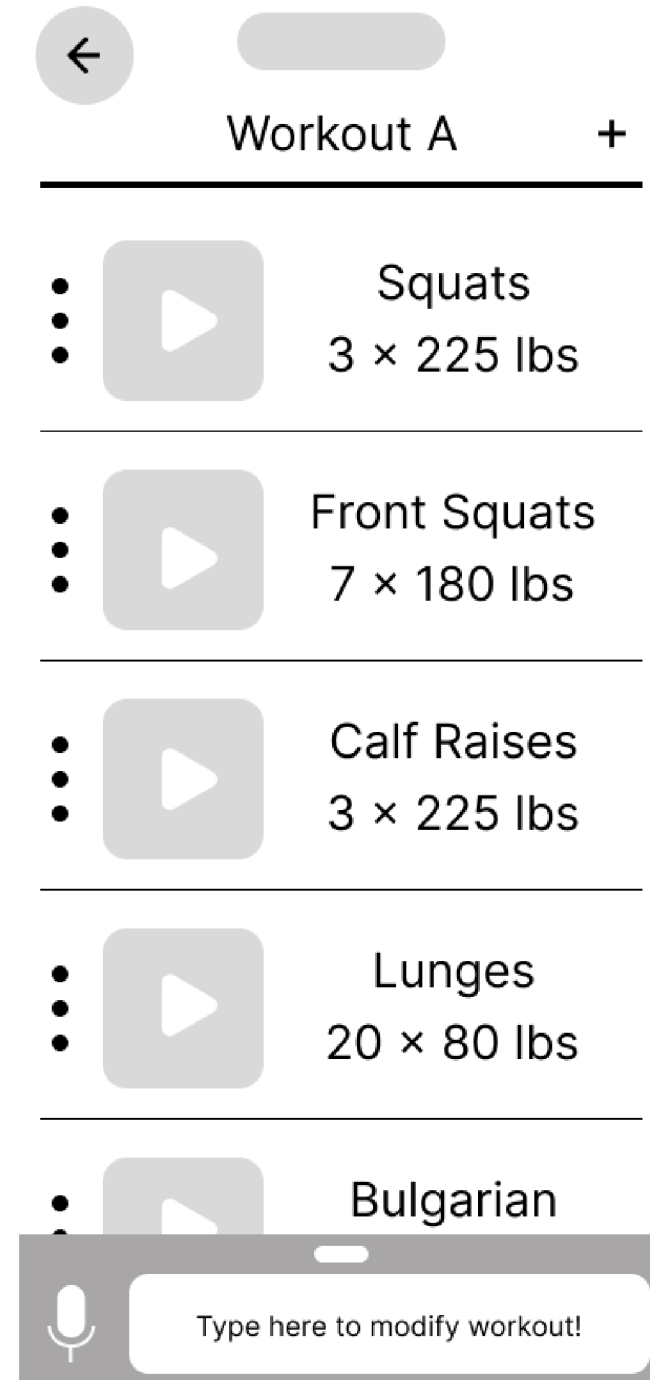


final med-fi

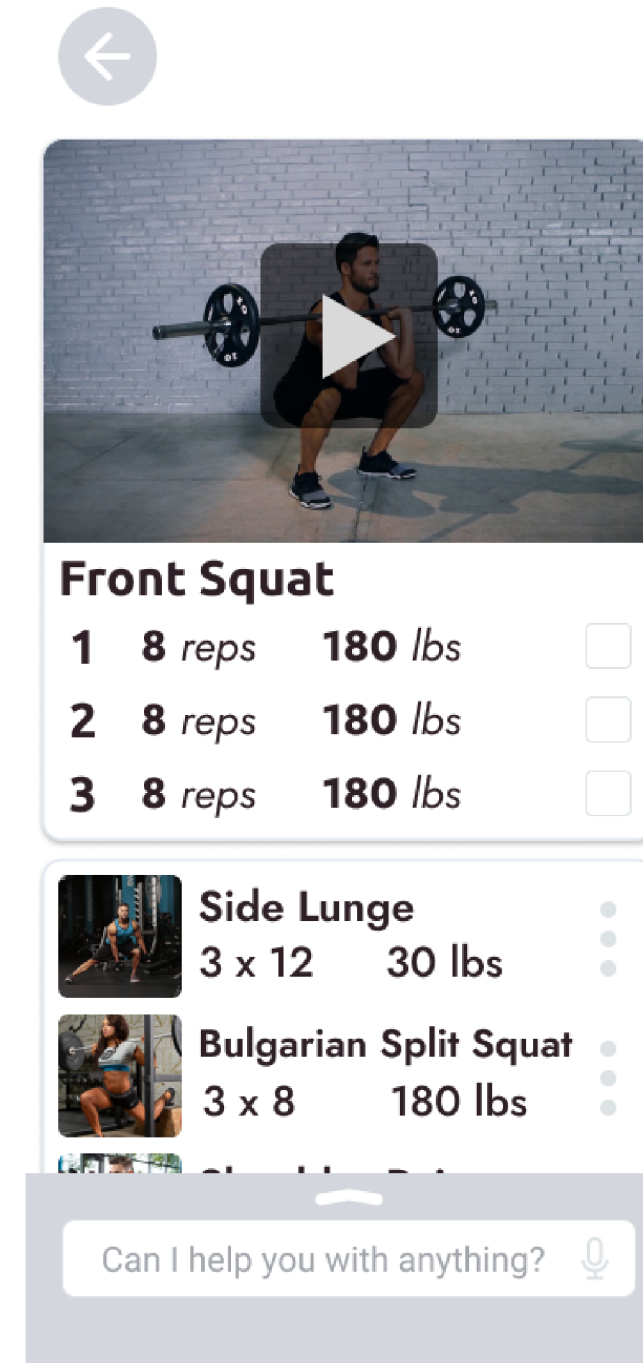


Major Design Changes

Active Exercise Video

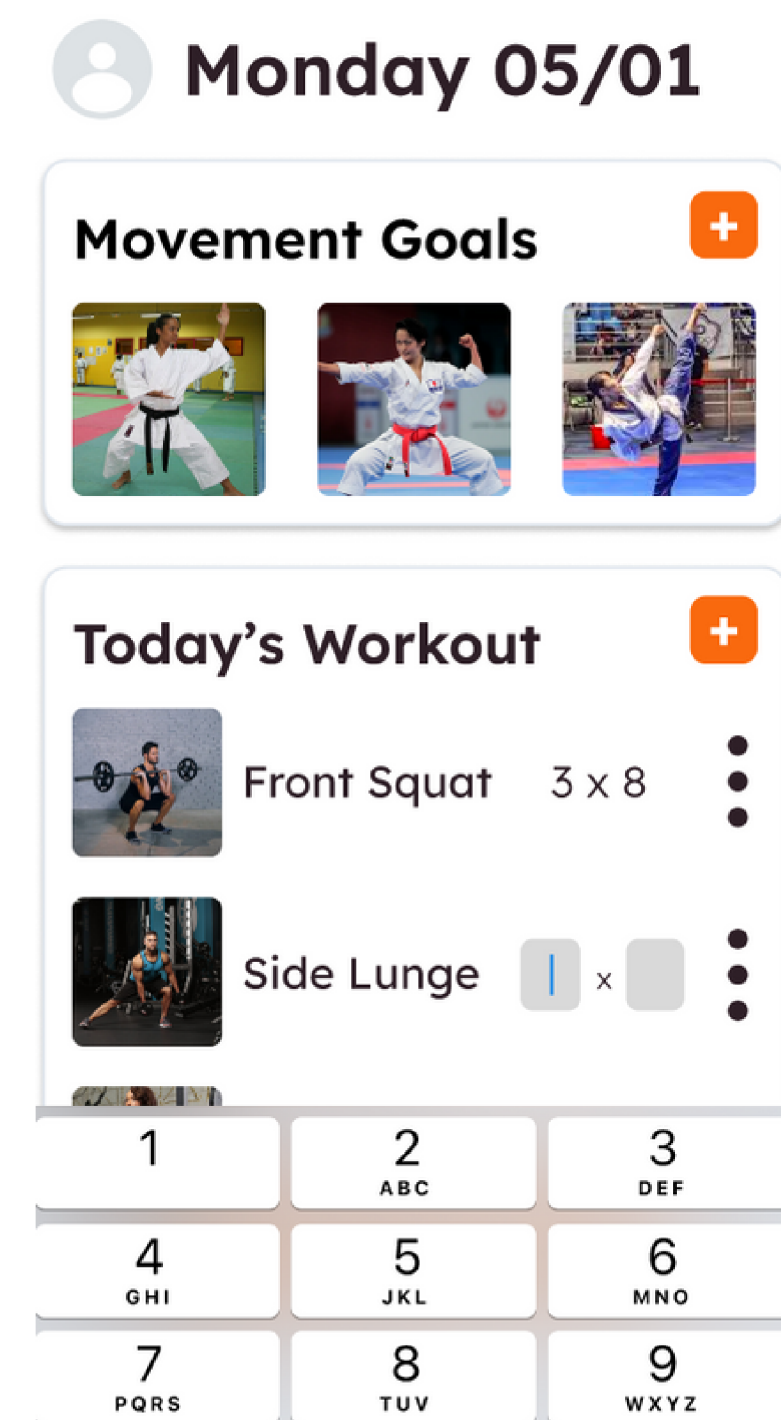
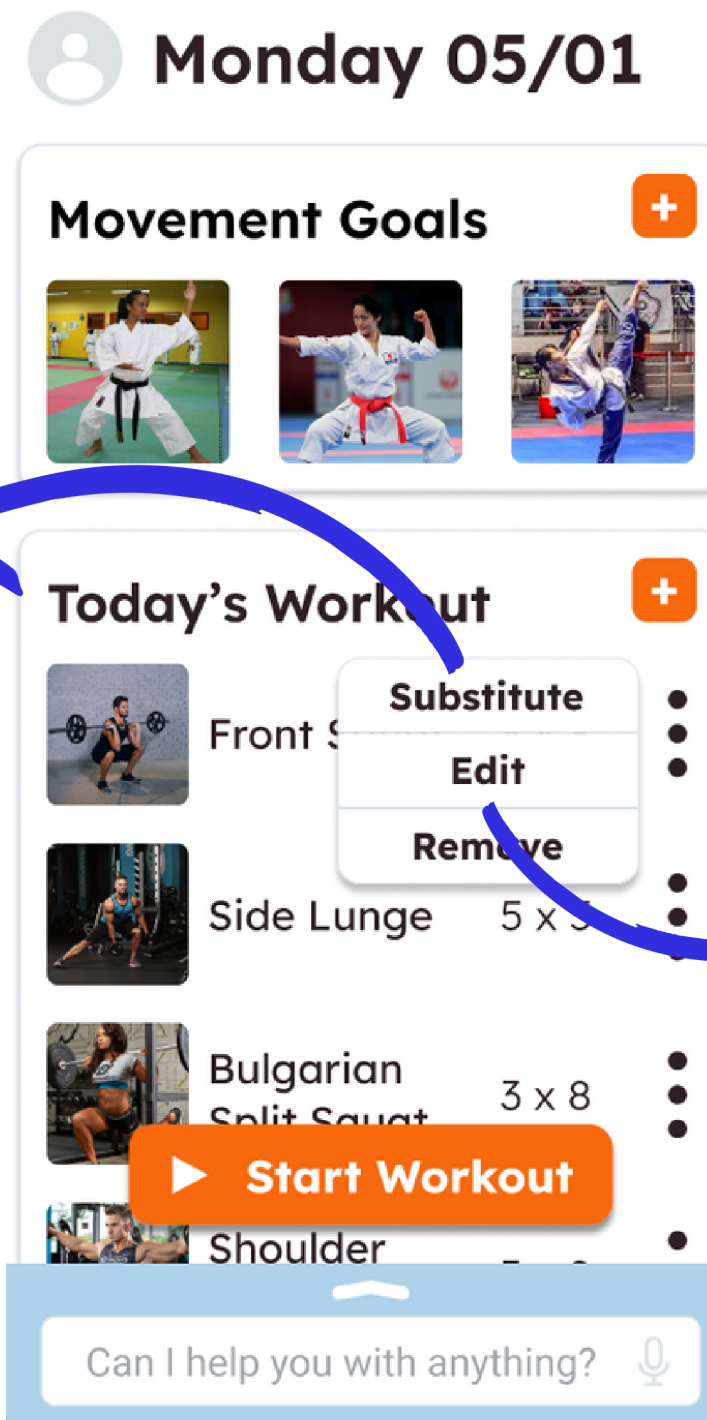
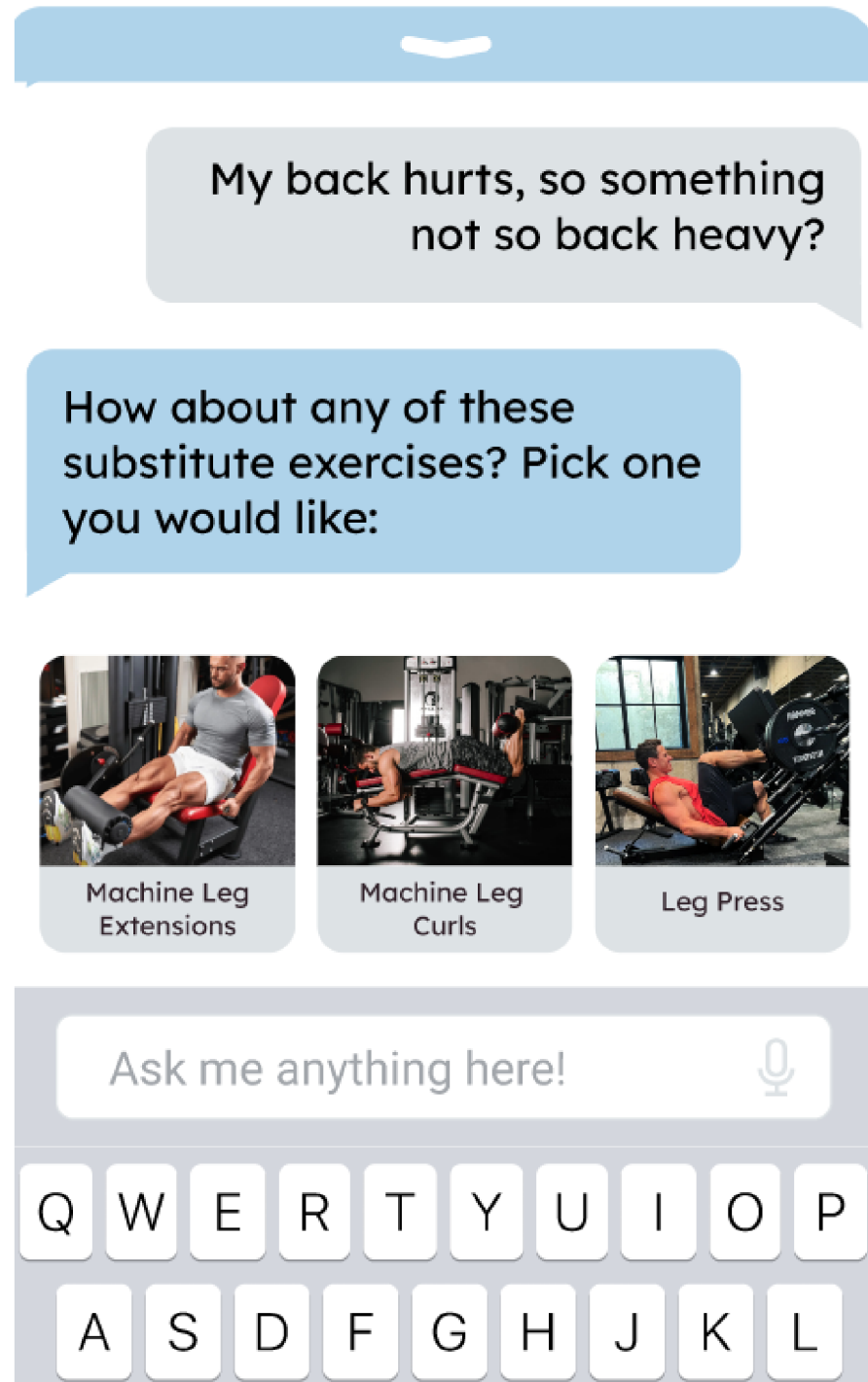


lo-fi



med-Fi v1

Added Edit / Substitute Flow



med-fi v2

Updated Design System

Monday 05/01

Movement Goals +



Today's Workout +


Front Squat

Side Lunge 5 x 5

Bulgarian Split Squat 3 x 8


Shoulder


Start Workout

Can I help you with anything? 


med-fi v2


Wednesday 06/07


Exercise Targets  +




Stability Stance Attack Stance Vertical Kick


Today's Workout  +

Front Squat 180 lbs • 3 Sets x 8 Reps targets 

Side Lunge 30 lbs • 3 Sets x 12 Reps targets 

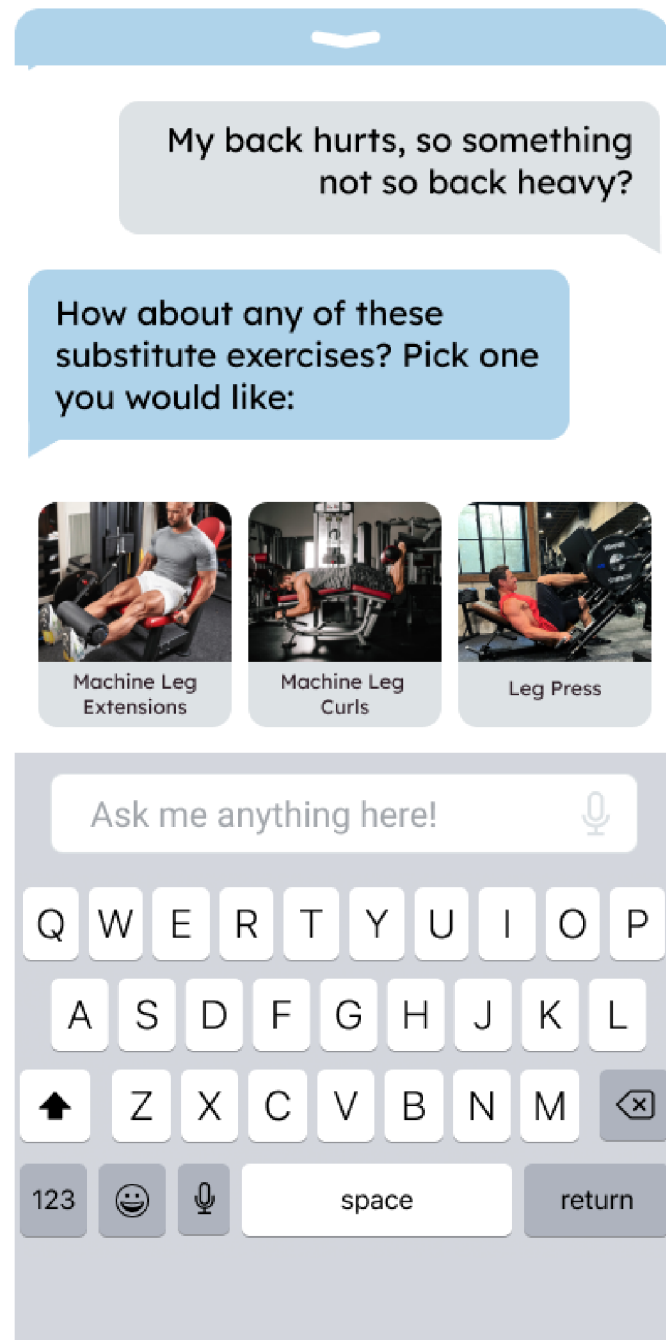
Split Squat targets 

Start Workout

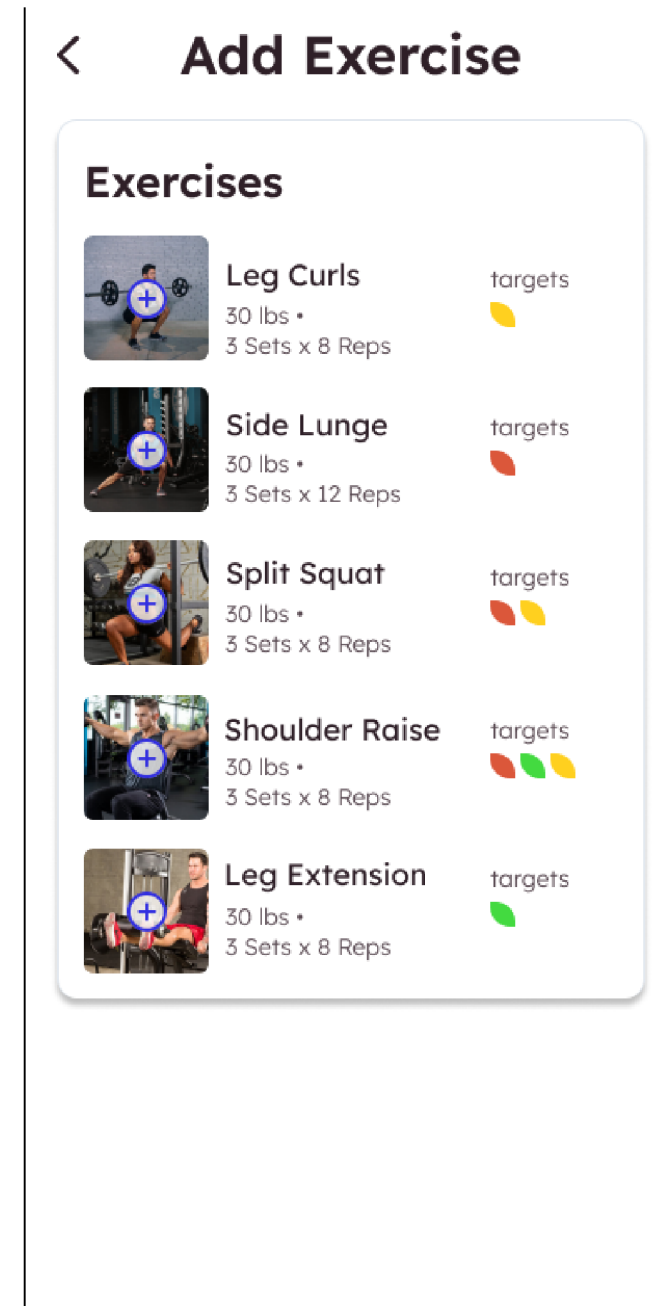
Can I help you with anything? 

final med-fi

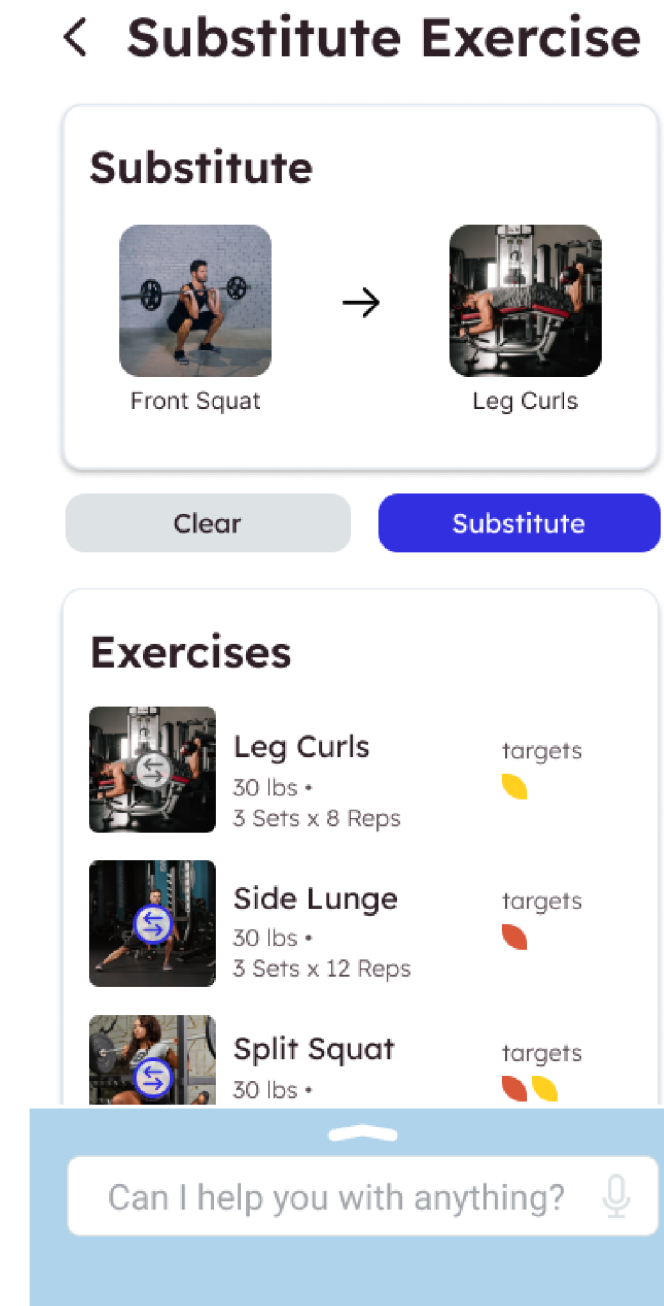
Add / Substitute Exercise UI



med-fi v3



final med-fi

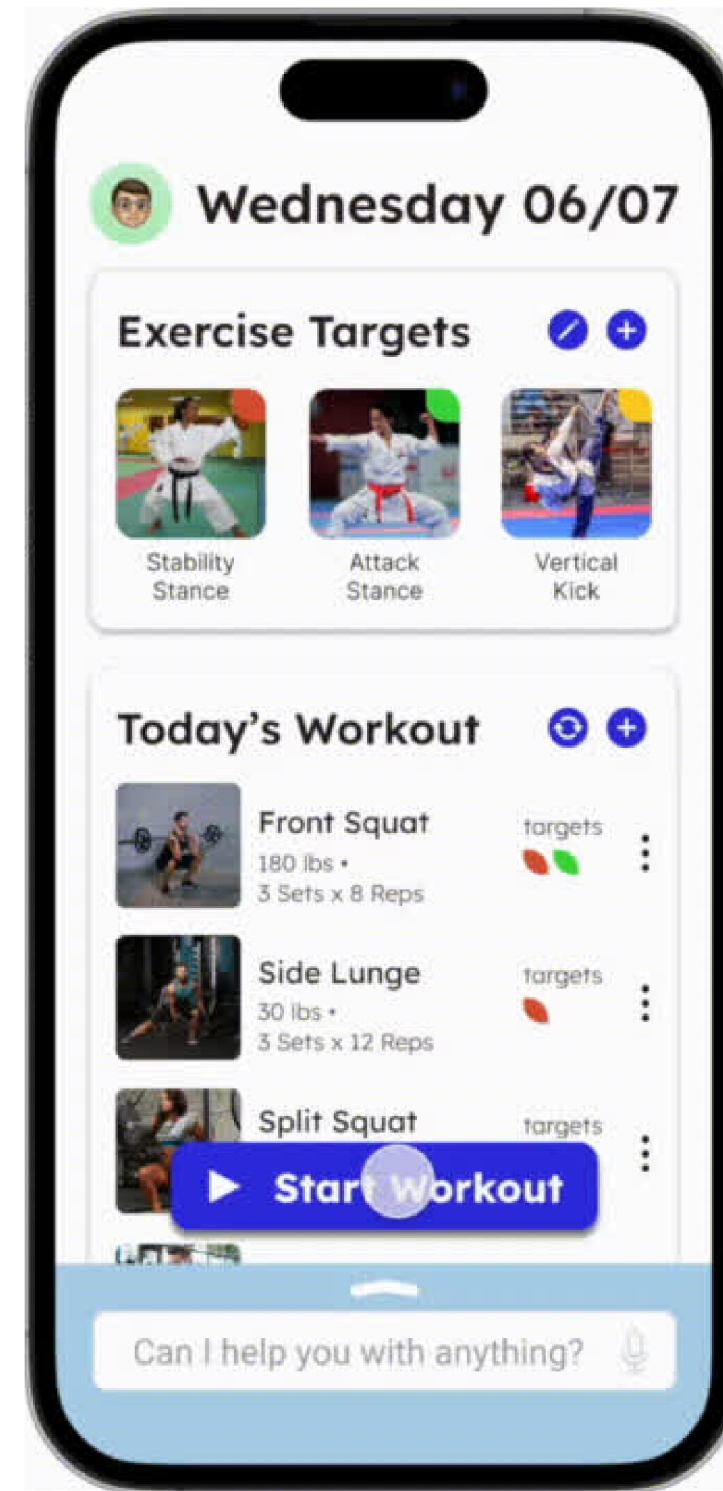




Tasks

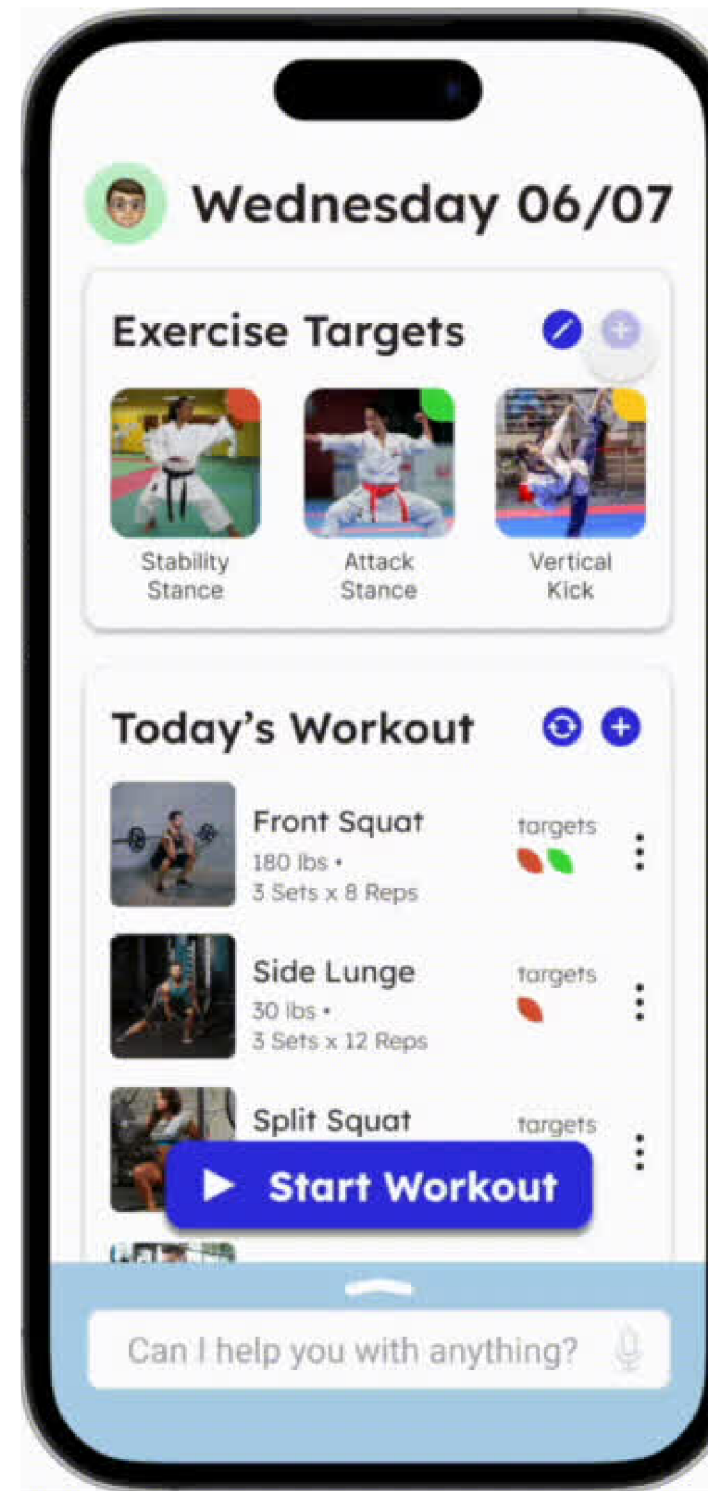


Simple Task: User wants to start an exercise



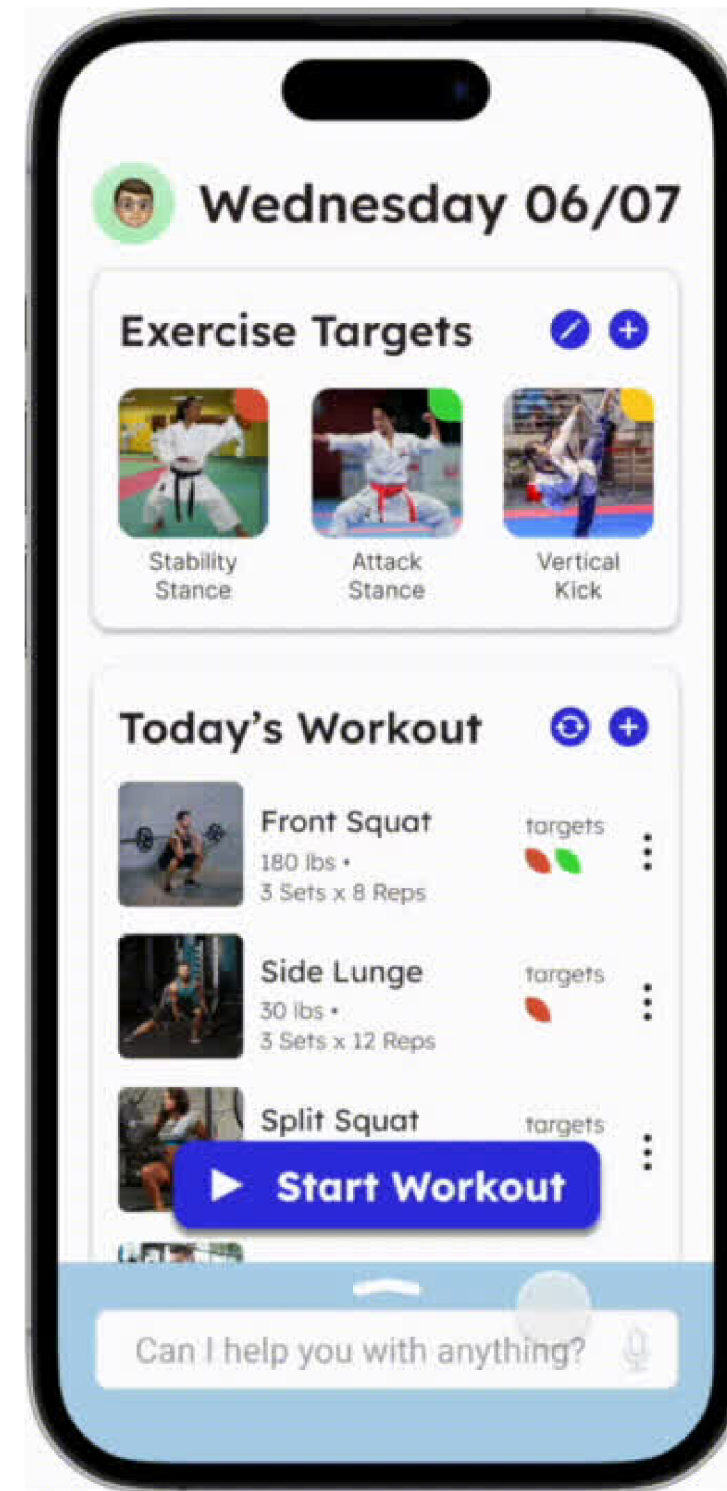


Moderate Task: User wants to generate an exercise plan to meet their strength goals

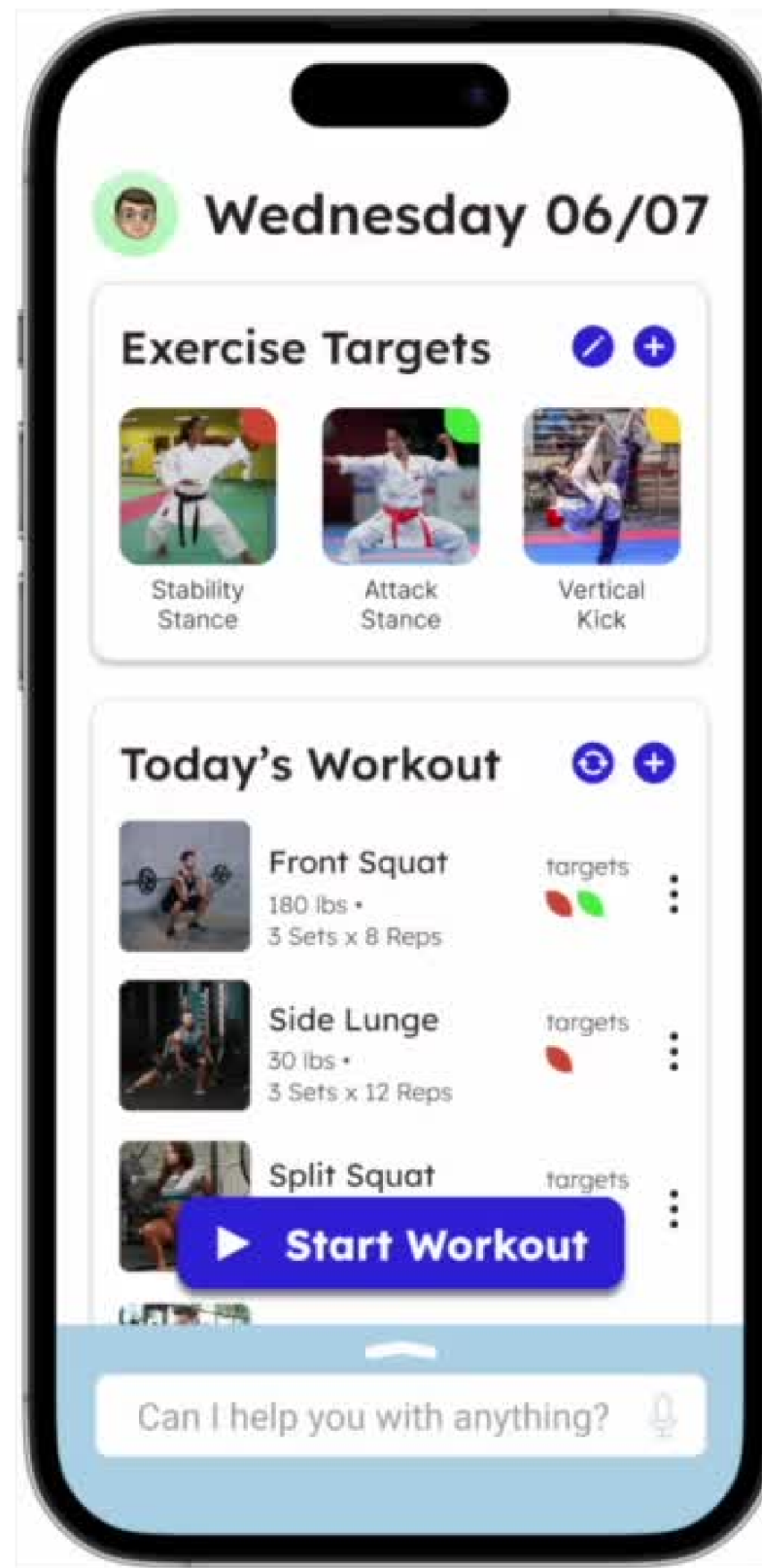




Complex Task: User wants to request alternative exercises of varying intensity



○○○ Demo



○○○ **Next Steps**

- 1.** More user testing on chat-bot and integrate it further
- 2.** Incorporate workout scheduling
- 3.** Investigate feasibility of CV muscle identification

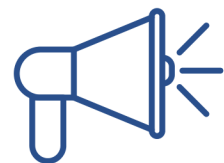
Summary



Key Innovation: AI generated workouts from video input + chat interactability



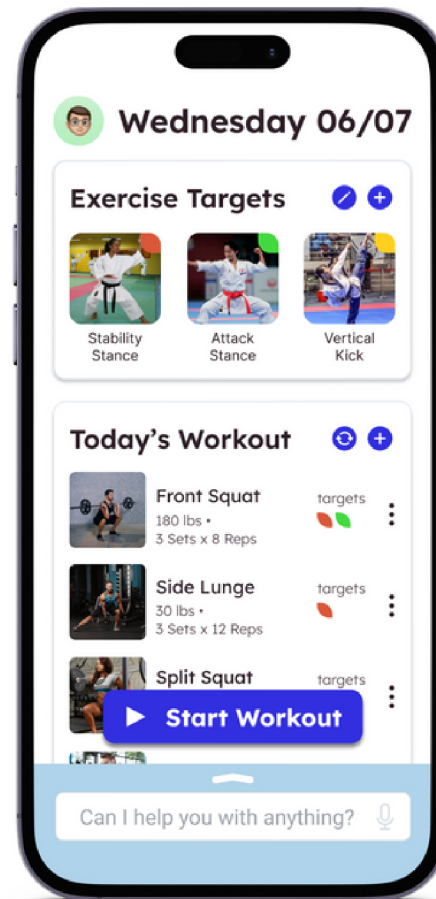
Immediate Impact: demonstrates feasibility of AI PT



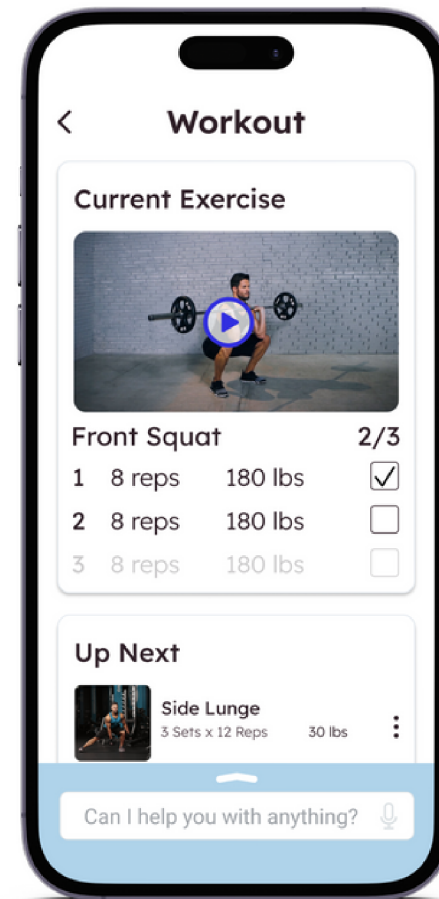
Long-term Impact: inspire AI projects to pursue greater accessibility in sports

Buddy Builder

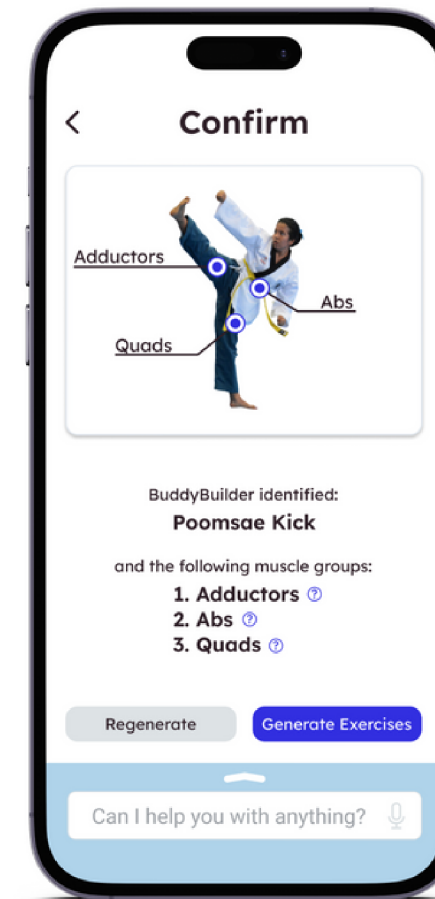
AI fitness app working to improve the accessibility of physical training resources for student athletes in niche sports



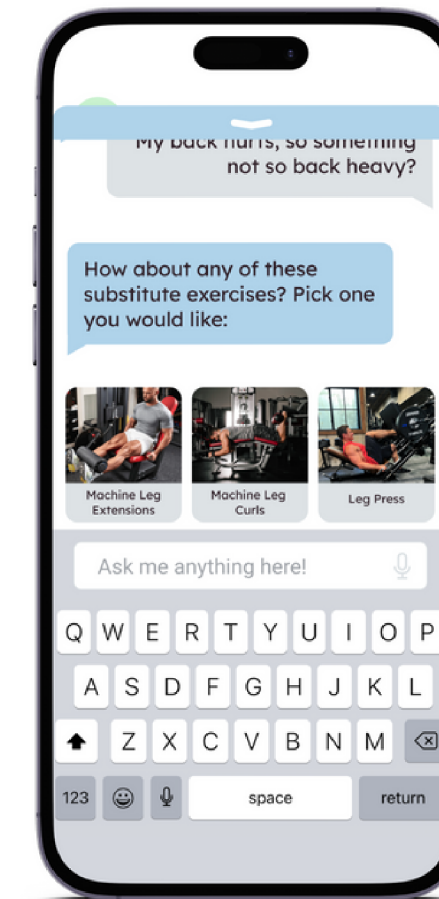
Work Towards Exercise Targets



Track Your Workout Progress



Personalize Workouts with AI and Vision



Get Assistance with LLM Chatbot

