

Project Documentation 1

Akash Srinivasan Caden Roberts Jhovanny Uribe
Andy Vo Ethan Cesario Aliyaa Islam

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1 Client

- Health Insurance Companies

2 Need Statement

- People with hand disabilities and injuries face challenges in attending physical therapy sessions multiple times a week during their recovery period due to the demands of their lives. This will slow or reverse recovery progress if sessions are insufficient or missed.

3 Goal Statement

- We aim to address this by providing a device that allows clients to perform their exercises at home, reducing in-person visits. Our goal is to make rehabilitation more convenient, accessible and efficient, allowing clients to have more control over their recovery.

4 Design Objective

4.1 Design Objective in Words

We aim to reduce physical therapy visits by up to 50%, subsequently reducing insurance costs.

4.2 Design Objective in Quantified Tables

Table 1: Design Objectives and Targets

Design Objective	Unit	Target/Range
Visits	Number of visits	10%–50% less
Device Cost	Dollars	> \$1440
Accessibility	Minutes	Greater than session time
Weight	lbs	< 2 lbs

5 Personas

5.1 End User

Table 2: User Persona: Mark


End User	
	Mark, 36 yrs old
Context	<ul style="list-style-type: none"> • Worked IT desk job for 12 years • Has one kid and two cats • Enjoys spending time with family • Carpal tunnel syndrome caused from typing most of the day on his computer
Goals	<ul style="list-style-type: none"> • Wants to start stretching hands to make it better as the pain is debilitating, and he really values being active with his family and pets
What does this entail	<ul style="list-style-type: none"> • He struggles to do the hand exercises prescribed from his doctor as he forgets to • The device will help him be consistent

Table 3: User Persona: Samantha

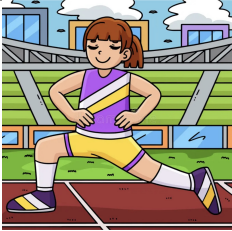


End User	
	<p>Samantha, 25 yrs old</p>
Context	<ul style="list-style-type: none"> • Weekend yoga instructor and passionate barista • Enjoys hiking, taking care of her plants, and spending time with friends • Got into car accident and injured hand; lost a lot of strength and mobility because of prolonged cast duration
Goals	<ul style="list-style-type: none"> • Remain consistent to regain hand mobility
What does this entail	<ul style="list-style-type: none"> • Struggles with progressing and sticking to physical therapy routine due to active/busy schedule • Stiff/weak joints, time sensitive to regain strength and mobility • Will allow her to progress without losing progress

Table 4: User Persona: Tom

End User	
	Tom, 42 yrs old
Context	<ul style="list-style-type: none"> • Physical therapist • Passionate about helping his clients the best he can
Goals	<ul style="list-style-type: none"> • Be able to prescribe exercises and track progress remotely with potentially stubborn clients • Retain clients who otherwise would cancel therapy altogether
What does this entail	<ul style="list-style-type: none"> • Understands that clients have a hard time making it to appointments and not everyone can afford to see him often

5.2 Clients

Table 5: Client: Insurance Company

Client	
	Insurance Company
<i>Continued on next page</i>	

Client (continued)	
Context	<ul style="list-style-type: none"> • Mid-size health insurance company • For-profit company • Wants to buy product to provide a service at a cheaper price • Increase retention rate for provided service
Goals	<ul style="list-style-type: none"> • To provide affordable healthcare to the average person • Allow more accessibility to physical therapy exercises
What does this entail	<ul style="list-style-type: none"> • Replacing physical therapy visits • Increasing more End Users to have access to in-person therapy meetings