2023

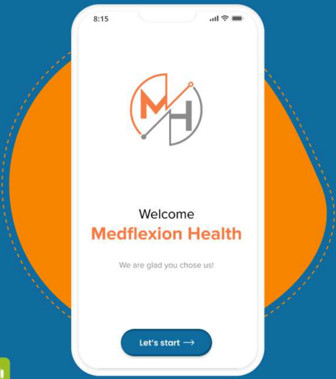
UI/UX Case Study

Health & Fitness

MEDFLEXION HEALTH
MEASURE-MONITOR-MODIFY

Patient Centered.
Data Driven.
Value Based.

Redefining Musculoskeletal Disorder (MSD) Success


8:15
Welcome
Medflexion Health
We are glad you chose us!
Let's start

Project Duration

21 Weeks

Tools

App Overview

The Medflexion Health team aspires to empower patients to achieve a better holistic personalized experience through engaging intelligent and predictable evidence based care that will enable and advance MSD patient desired outcomes.

Live the life YOU want...

Mission

Achieve and maintain global leadership in the treatment and rehabilitation of upper extremity disorders through intelligent wearable technology solutions that measure, monitor and modify through real time feedback range of motion limits and aggregated actionable data that will improve patient desired outcomes.

Our Purpose

The Medflexion Health team aspires to empower patients to achieve a better holistic personalized experience through engaging intelligent and predictable evidence based care that will enable and advance MSD patient desired outcomes.

Team Members & Role

1. **Ashish Gandhi:** Sr. Project Manager
2. **Nimisha Chavda:** Sr. UI Designer
3. **Vaidehi Patel:** Sr. iOS Developer
4. **Amit Soni:** Android Developer
5. **Harita Patel:** QA Engineer
6. **Pritesh Vora:** Backend Developer

Responsibility

- User Research
- Concept Design
- Development
- Testing

Work Process

01

Ideate

- User Research
- User Persona

02

Define

- Problem Statement
- Goal Statement

03

Design

- Low Fidelity Wireframe
- High Fidelity Wireframe

04

Development

- Android App Development
- iOS App Development

05

Test

- Usability Testing
- Test Cases

06

Release

- Play Store
- App Store

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- Observation
- User Flow
- Prototype
- Visual Design
- Backend Development
- Development Testing

ROBLEM WE ARE TRYING TO S
IOTTIVE

The problem we are trying to solve

Strategy Board

Our strategy for these projects that helps us to define the problem and select our objectives

IOTTIVE
DID WE DISCOVER THE PROBL

Research Method

Usability Testing

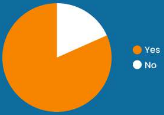
Testing Objectives:

The goal of this test is to assess the usability of users interacting with medflexion flow on mobile.
We would like to observe user behavior and measure.
If our users understand and are able to complete process.

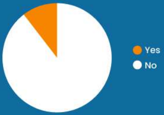
Quantity Research:

We Interviewed some old age people to need their requirement.
After using the medflexion gloves their hand movement improvement is 40% to 60%

Q1. Are you familiar with wearble devices?



Q2. Do you have any knowledge of the home healthcare products that are currently on the market for hand exercise measuring?



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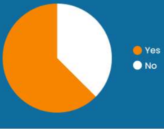
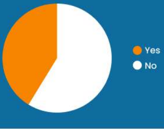
Q3. What about the idea of miniaturizing larger equipment while maintaining accuracy?

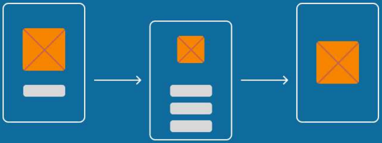


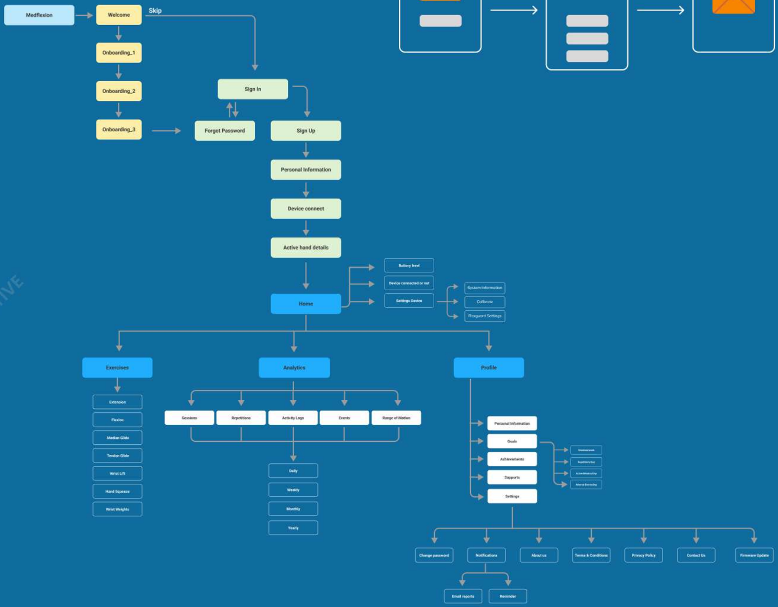
Q4. Do you manage your hand movement and hand exercise?



User Flow

We draw user flow to show the path a user takes through the product as they complete a specific task





Medflexion

Welcome

Skip

Onboarding_1

Onboarding_2

Onboarding_3

Sign In

Forgot Password

Sign Up

Personal Information

Device connect

Active hand details

Home

Battery level

Device connected or not

Settings Device

System Information

Calibrate

Flexguard Settings

Exercises

Extension

Flexion

Median Glide

Tendon Glide

Wrist Lift

Hand Squeeze

Wrist Weights

Analytics

Sessions

Repetitions

Activity Logs

Events

Range of Motion

Daily

Weekly

Monthly

Yearly

Profile

Personal Information

Goals

Achievements

Supports

Settings

Change password

Notifications

About us

Terms & Conditions

Privacy Policy

Contact Us

Firmware Update

Email reports

Reminder

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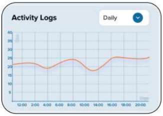
PROJECT FEATURES

IOTTIVE

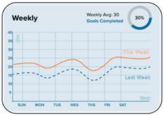
IOTTIVE

Track your hand movement reports

To enhance the quality of life for patients, Medflexion focuses on modifying harmful habits.



Activity Logs
Daily
40
35
30
25
20
15
10
5
12:00
2:00
4:00
6:00
8:00
10:00
14:00
16:00
18:00
20:00



Weekly
Weekly Avg: 30
Goals Completed
30%
40
35
30
25
20
15
10
5
This Week
Last Week
SUN
MON
TUS
WES
THS
FRI
SAT

PATIENTS CLINICIANS

IOTTIVE

Project Features

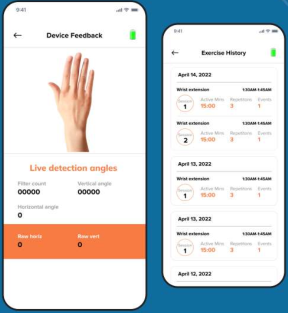
Device Summary Screen

- Live view of current angle
- Battery status
- Statistics on number of alarm events, type of alarm event
- Relative activity level (standard deviation or some other metric)
- Min/Max angles for X and Y (Range of Motion)

Calibrate Firmware

- Animation / picture showing hand in neutral position (improved graphics)

FlexGuardTM Thresholds Firmware


9:41
Device Feedback
Live detection angles
Exercise History

Filter count 00000
Vertical angle 00000
Horizontal angle 0
Raw horiz 0
Raw vert 0

April 14, 2022

Exercise	Time	Session	Active Mins	Repetitons	Events
Wrist extension	1:30AM-1:45AM	1	15:00	3	1
Wrist extension	1:30AM-1:45AM	2	15:00	3	1

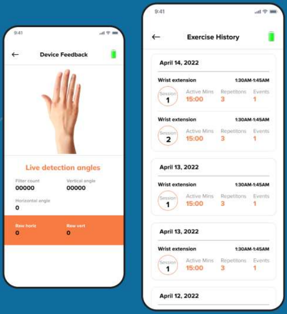
April 13, 2022

Exercise	Time	Session	Active Mins	Repetitons	Events
Wrist extension	1:30AM-1:45AM	1	15:00	3	1

April 13, 2022

Exercise	Time	Session	Active Mins	Repetitons	Events
Wrist extension	1:30AM-1:45AM	1	15:00	3	1

April 12, 2022


9:41
Device Feedback
Live detection angles
Exercise History

Filter count 00000
Vertical angle 00000
Horizontal angle 0
Raw horiz 0
Raw vert 0

April 14, 2022

Exercise	Time	Session	Active Mins	Repetitons	Events
Wrist extension	1:30AM-1:45AM	1	15:00	3	1
Wrist extension	1:30AM-1:45AM	2	15:00	3	1

April 13, 2022

Exercise	Time	Session	Active Mins	Repetitons	Events
Wrist extension	1:30AM-1:45AM	1	15:00	3	1

April 13, 2022

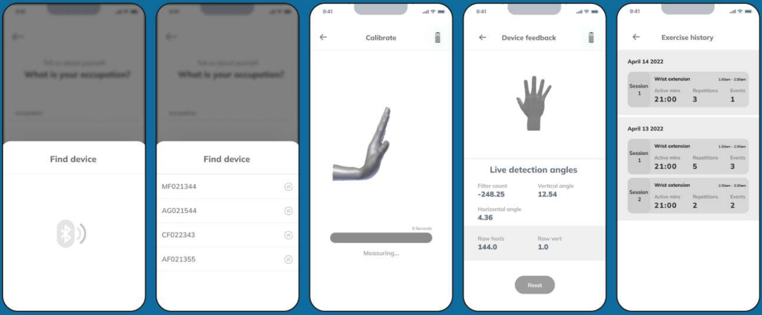
Exercise	Time	Session	Active Mins	Repetitons	Events
Wrist extension	1:30AM-1:45AM	1	15:00	3	1

April 12, 2022

Functionalities in iOS and Android Mobile

1. Connect to Medflexion device.
2. Setup Medflexion device.
3. Enter the user details(age, height, weight, hand pain level)
4. Hand calibration, device setting & information.
5. Firmware update.
6. Flexguard™ device setting.
7. Exercise live detection, video, analytics, user profile, notifications.

Several Wireframes (Mobile App)


9:41
Tell us about yourself
What is your occupation?
occupation
Find device
Find device
Calibrate
5 Seconds
Measuring...
Device feedback
Live detection angles
Reset
Exercise history

MF021344
AG021544
CF022343
AF021355

Filter count -248.25
Vertical angle 12.54
Horizontal angle 4.36
Raw horiz 144.0
Raw vert 1.0

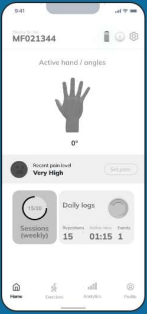
April 14 2022

Session	Exercise	Time	Active mins	Repetitions	Events
1	Wrist extension	1:30pm - 2:30pm	21:00	3	1

April 13 2022

Session	Exercise	Time	Active mins	Repetitions	Events
1	Wrist extension	1:30pm - 2:30pm	21:00	5	3
2	Wrist extension	2:30pm - 3:30pm	21:00	2	2

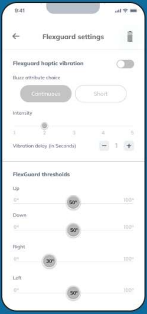
IOTTIVE

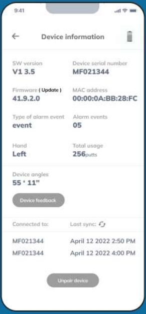

9:41
Device Sr. No.
Active hand / angles
0°
Set pain
15/20
Sessions (weekly)
Daily logs
Home
Exercises
Analytics
Profile

MF021344

Recent pain level: **Very High**

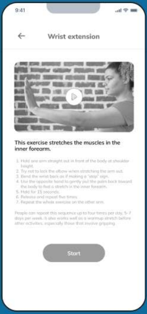
Repetitions	Active mins	Events
15	01:15	1


9:41
Flexguard settings
Flexguard haptic vibration
Buzz attribute choice
Continuous
Short
Intensity
1
2
3
4
5
Vibration delay (in Seconds)
−
1
+
FlexGuard thresholds
Up
0°
50°
100°
Down
0°
50°
100°
Right
0°
30°
100°
Left
0°
50°
100°


9:41
Device information
Device feedback
Unpair device

SW version: **V1 3.5**
Device serial number: **MF021344**
Firmware (Update): **41.9.2.0**
MAC address: **00:00:0A:BB:28:FC**
Type of alarm event: **event**
Alarm events: **05**
Hand: **Left**
Total usage: **256** putts
Device angles: **55 ' 11"**

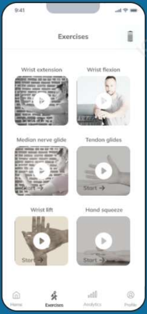
Connected to:	Last sync:
MF021344	April 12 2022 2:50 PM
MF021344	April 12 2022 4:00 PM


9:41
Wrist extension
Start

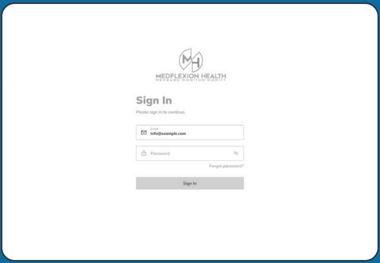
This exercise stretches the muscles in the inner forearm.

1. Hold one arm straight out in front of the body at shoulder height.
2. Try not to lock the elbow when stretching the arm out.
3. Bend the wrist back as if making a "stop" sign.
4. Use the opposite hand to gently pull the palm back toward the body to feel a stretch in the inner forearm.
5. Hold for 15 seconds.
6. Release and repeat five times.
7. Repeat the whole exercise on the other arm.

People can repeat this sequence up to four times per day, 5-7 days per week. It also works well as a warmup stretch before other activities, especially those that involve gripping.


9:41
Exercises
Wrist extension
Wrist flexion
Median nerve glide
Start →
Tendon glides
Start →
Wrist lift
Start →
Hand squeeze
Start →
Home
Exercises
Analytics
Profile

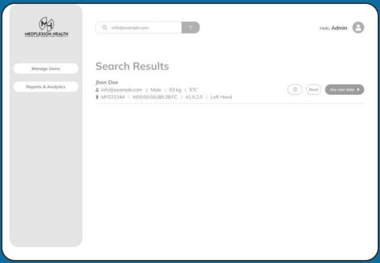
Several Wireframes(Admin Penal)


MEDFLEXION HEALTH
MEASURE·MONITOR·MODIFY
Email
Password
Forgot password?
Sign In

Sign In

Please sign in to continue.

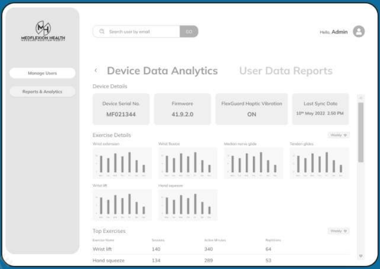
Email: info@example.com


MEDFLEXION HEALTH
Manage Users
Reports & Analytics
Hello, Admin
Block
See user data

Search: info@example.com

Search Results

Jhon Doe
info@example.com | Male | 53 kg | 5'5"
MF021344 | MD0:00:0A:BB:28:FC | 41.9.2.0 | Left Hand


MEDFLEXION HEALTH
Manage Users
Reports & Analytics
Search user by email
GO
Hello, Admin
User Data Reports
Exercise Details
Weekly
Wrist extension
Wrist flexion
Median nerve glide
Tendon glides
Wrist lift
Hand squeeze
Weekly

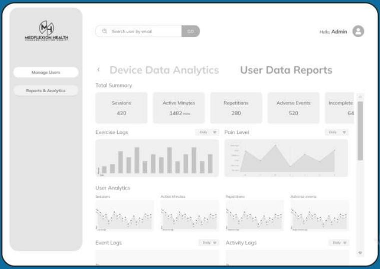
Device Data Analytics

Device Details

Device Serial No.	Firmware	FlexGuard Haptic Vibration	Last Sync Date
MF021344	41.9.2.0	ON	10th May 2022 2.50 PM

Top Exercises

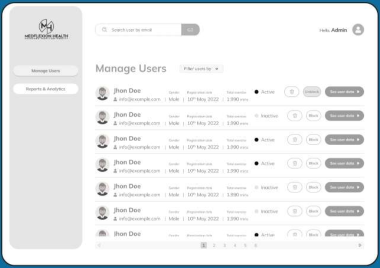
Exercise Name	Sessions	Active Minutes	Repetitions
Wrist lift	140	340	64
Hand squeeze	134	289	53


MEDFLEXION HEALTH
Manage Users
Reports & Analytics
Search user by email
GO
Hello, Admin
Device Data Analytics
Exercise Logs
Daily
Pain Level
Daily
User Analytics
Sessions
Active Minutes
Repetitions
Adverse events
Event Logs
Daily
Activity Logs
Daily

User Data Reports

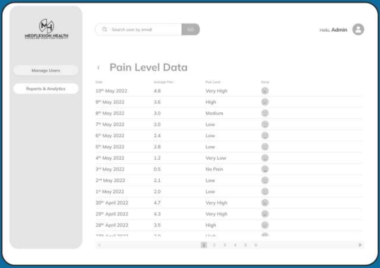
Total Summary

Sessions	Active Minutes	Repetitions	Adverse Events	Incomplete
420	1482 mins	280	520	64


MEDFLEXION HEALTH
Manage Users
Reports & Analytics
Search user by email
GO
Hello, Admin
Filter users by
Unblock
Block
See user data
1
2
3
4
5
6

Manage Users

Name	Email	Gender	Registration date	Total exercise	Status
Jhon Doe	info@example.com	Male	10th May 2022	1,990 mins	Active
Jhon Doe	info@example.com	Male	10th May 2022	1,990 mins	Inactive
Jhon Doe	info@example.com	Male	10th May 2022	1,990 mins	Active
Jhon Doe	info@example.com	Male	10th May 2022	1,990 mins	Active
Jhon Doe	info@example.com	Male	10th May 2022	1,990 mins	Inactive
Jhon Doe	info@example.com	Male	10th May 2022	1,990 mins	Inactive
Jhon Doe					Active

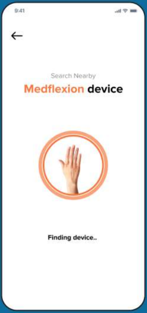

MEDFLEXION HEALTH
Manage Users
Reports & Analytics
Search user by email
GO
Hello, Admin
1
2
3
4
5
6

Pain Level Data

Date	Average Pain	Pain Level	Emoji
10th May 2022	4.8	Very High	
9th May 2022	3.6	High	
8th May 2022	3.0	Medium	
7th May 2022	2.0	Low	
6th May 2022	2.4	Low	
5th May 2022	2.8	Low	
4th May 2022	1.2	Very Low	
3rd May 2022	0.5	No Pain	
2nd May 2022	2.1	Low	
1st May 2022	2.0	Low	
30th April 2022	4.7	Very High	
29th April 2022	4.3	Very High	
28th April 2022	3.5	High	

IOTTIVE

Interface App Design

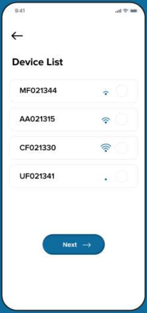


9:41

Search Nearby

Medflexion device

Finding device..



9:41

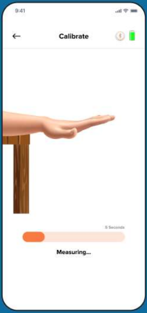
Device List

MF021344

AA021315

CF021330

UF021341

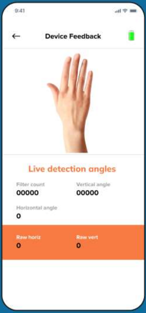


9:41

Calibrate

5 Seconds

Measuring...



9:41

Device Feedback

Live detection angles

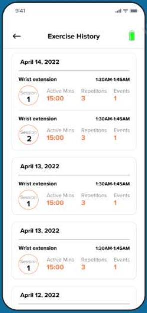
Filter count: 00000

Vertical angle: 00000

Horizontal angle: 0

Raw horiz: 0

Raw vert: 0



9:41

Exercise History

April 14, 2022

Wrist extension 1:30AM-1:45AM

Session	Active Mins	Repetitons	Events
1	15:00	3	1

Wrist extension 1:30AM-1:45AM

Session	Active Mins	Repetitons	Events
2	15:00	3	1

April 13, 2022

Wrist extension 1:30AM-1:45AM

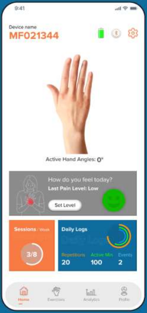
Session	Active Mins	Repetitons	Events
1	15:00	3	1

April 13, 2022

Wrist extension 1:30AM-1:45AM

Session	Active Mins	Repetitons	Events
1	15:00	3	1

April 12, 2022



9:41

Device name

MF021344

Active Hand Angles: 0°

How do you feel today?

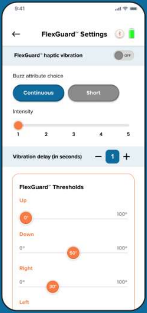
Last Pain Level: Low

Sessions / Week: 3/8

Daily Logs

Repetitions	Active Min	Events
20	100	2

Set Level
Home
Exercises
Analytics
Profile



9:41

FlexGuard™ Settings

FlexGuard™ haptic vibration: OFF

Buzz attribute choice: Continuous / Short

Intensity: 1 2 3 4 5

Vibration delay (in seconds): − 1 +

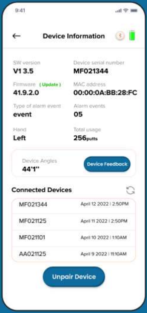
FlexGuard™ Thresholds

Up: 0° — 100°

Down: 0° — 50° — 100°

Right: 0° — 30° — 100°

Left



9:41

Device Information

SW version: V1 3.5

Device serial number: MF021344

Firmware (Update): 41.9.2.0

MAC address: 00:00:0A:BB:28:FC

Type of alarm event: event

Alarm events: 05

Hand: Left

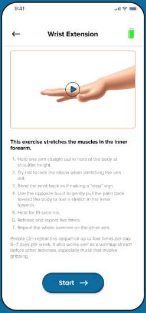
Total usage: 256putts

Device Angles: 44'1"

Connected Devices

MF021344	April 12 2022 | 2:50PM
MF021125	April 11 2022 | 2:50PM
MF021101	April 10 2022 | 1:10AM
AA021125	April 9 2022 | 11:10AM

Device Feedback
Unpair Device



9:41

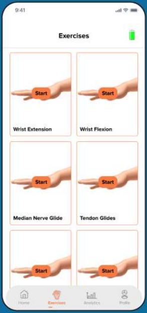
Wrist Extension

This exercise stretches the muscles in the inner forearm.

1. Hold one arm straight out in front of the body at shoulder height.
2. Try not to lock the elbow when stretching the arm out.
3. Bend the wrist back as if making a "stop" sign.
4. Use the opposite hand to gently pull the palm back toward the body to feel a stretch in the inner forearm.
5. Hold for 15 seconds.
6. Release and repeat five times.
7. Repeat the whole exercise on the other arm.

People can repeat this sequence up to four times per day, 5–7 days per week. It also works well as a warmup stretch before other activities, especially those that involve gripping.

Start →



9:41

Exercises

Wrist Extension

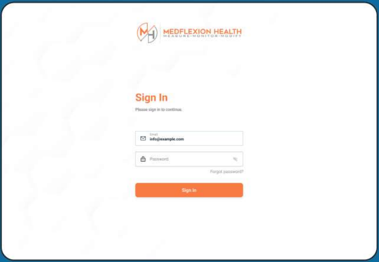
Wrist Flexion

Median Nerve Glide

Tendon Glides

Start
Start
Start
Start
Start
Start
Home
Exercises
Analytics
Profile

Several Design(Admin Penal)



MEDFLEXION HEALTH
MEASURE·MONITOR·MODIFY

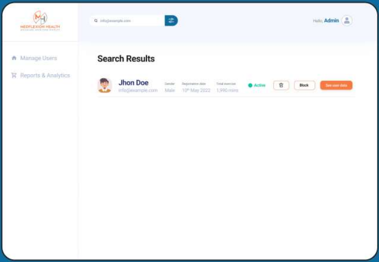
Sign In

Please sign in to continue.

Email: info@example.com

Password

Forgot password?



MEDFLEXION HEALTH

info@example.com

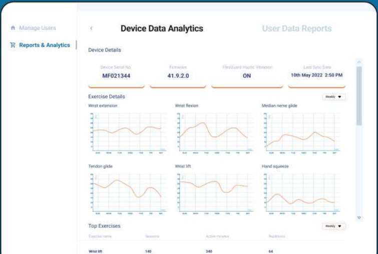
Hello, Admin

Manage Users

Reports & Analytics

Search Results

	Gender	Registration date	Total exercise				
Jhon Doe info@example.com	Male	10th May 2022	1,990 mins	Active		Block	See user data


Manage Users
Reports & Analytics
User Data Reports
Weekly

Device Data Analytics

Device Details

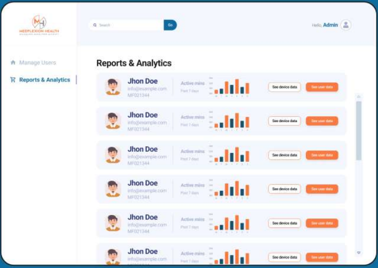
Device Serial No.	Firmware	FlexGuard Haptic Vibration	Last Sync Date
MF021344	41.9.2.0	ON	10th May 2022 2:50 PM

Exercise Details

Wrist extension
Wrist flexion
Median nerve glide
Tendon glide
Wrist lift
Hand squeeze

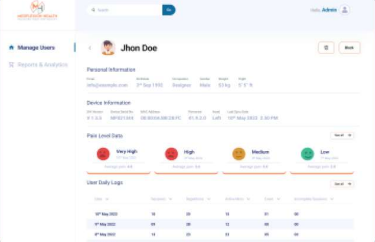
Top Exercises

Exercise name	Sessions	Active minutes	Repetitions
Wrist lift	140	340	64
Hand squeeze	134	289	53


MEDFLEXION HEALTH
Search
Go
Hello, Admin
Manage Users
Reports & Analytics
See device data
See user data

Reports & Analytics

Jhon Doe info@example.com MF021344	Active mins Past 7 days	
Jhon Doe info@example.com MF021344	Active mins Past 7 days	
Jhon Doe info@example.com MF021344	Active mins Past 7 days	
Jhon Doe info@example.com MF021344	Active mins Past 7 days	
Jhon Doe info@example.com MF021344	Active mins Past 7 days	
Jhon Doe info@example.com	Active mins Past 7 days	


MEDFLEXION HEALTH
Search
Go
Hello, Admin
Manage Users
Reports & Analytics
Block
See all

Jhon Doe

Personal Information

Email	Birthdate	Occupation	Gender	Weight	Height
info@example.com	3rd Sep 1992	Designer	Male	53 kg	5' 5" ft

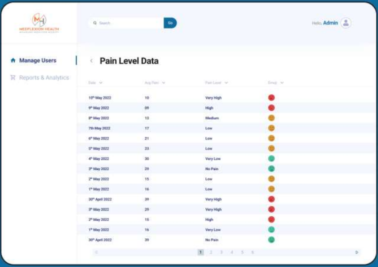
Device Information

SW Version	Device Serial No.	MAC Address	Firmware	Hand	Last Sync Date
V 1.3.5	MF021344	[illegible]	41.9.2.0	Left	10th May 2022 2:30 PM

Pain Level Data

Very High · High · Medium · Low

User Daily Logs


MEDFLEXION HEALTH
Search
Go
Hello, Admin
Manage Users
Reports & Analytics
1 2 3 4 5 6

Pain Level Data

Date	Avg Pain	Pain Level	Emoji
10th May 2022	10	Very High	🔴
9th May 2022	09	High	🔴
8th May 2022	13	Medium	🟠
7th May 2022	17	Low	🟠
6th May 2022	21	Low	🟠
5th May 2022	23	Low	🟠
4th May 2022	30	Very Low	🟢
3rd May 2022	29	No Pain	🟢
2nd May 2022	15	Low	🟠
1st May 2022	16	Low	🟠
30th April 2022	39	Very High	🔴
3rd May 2022	29	Very High	🔴
2nd May 2022	15	High	🔴
1st May 2022	16	Very Low	🟢
30th April 2022	39	No Pain	🟢

IOTTIVE

Our Solution

1. Our Bluetooth Expertise

One of Medflexion's primary worries was the functionality of the app with Bluetooth devices, including the app's ability to maintain a stable Bluetooth link while the user is using the device and establish a reliable connection. We handled Medflexion issues with ease because we have been using Bluetooth technology for more than 7 years.

2. Our Design Thinking Approach

Our design thinking sessions to identify improvements & recommend standard practices that allowed us to develop an easy-to-use Application. Our design teams simplified UI with easy navigation, user verification, sign-up, user onboarding & intuitive user flows. These outcomes resulted in engaging experience for end users.

3. Project Planning & Execution

Our agile methodology enabled us to design & developed a prioritized product roadmap set for milestone based delivery forward. This process allow us to focus our resource management, allowing us to stay within client's budget while ensuring quality. Our process enables us to provide strategic roadmap to outline clear plan for next steps and ensure successful future growths.

Technologies Used

Bluetooth

Platforms

If you are at the right place for a skilled team to outsource wearable app development services, you are in the right place.

Let's talk about your project!

Thank You
F❤r Attention !

For Work Or Collaboration, Please Contact Us At:

LinkedIn
IOTTIVE PVT. LTD.

Skype
sales@iottive.com

Website
www.iottive.com

Call Us
+91-7948908712