



***RehabRelive***

Redefining Rehabilitation



# Galanto has a Credible Leadership team



**Ms Rupsha Mukherjee**  
Product Testing Lead  
M Tech, IIT Gandhinagar  
B Tech, Biomedical Engineering,  
NIT Raipur (Silver Medalist)  
5 scientific articles



**Dr Chandan Kumar Jha**  
Product Development Lead  
PhD, IIT Gandhinagar  
Gold medal (Outstanding Innovation)  
2 patents, 11 scientific articles



**Ms Ruchita Mukherjee**  
Company Operations Lead  
B Tech, Shri Shankara  
Technical Campus,  
Chhattisgarh



Gandhian Young Technological  
Innovation Awards, BIRAC



INAE Young Innovator and  
Entrepreneur Award 2021



Outstanding Innovation Award,  
IIT Gandhinagar, 2021



NIDHI PRAYAS 2020

We envision to transform the rehabilitation landscape in India through modern and innovative technology



**Mr Kshitij Gajapure**  
Virtual Reality Product Lead  
B Tech, IIT Gandhinagar  
Best of Vuforia track winner,  
MIT Reality Hack, MIT (USA)  
IGDA Award winner



**Mr Kundan Jha**  
Software Development Lead  
B Tech, MIT Meerut



**Mr Maitreya Pande**  
Design Intern  
B Design (Industrial Product),  
UID Gandhinagar



A BIRAC - C-CAMP Initiative  
BIRAC Cash Prize, NBEC  
2020



AIT 2020,  
Swissnex India



Winner,  
Student Startup Grant  
Challenge 2020



Outstanding Results Award,  
OFS-26, Switzerland



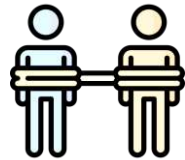
# The Problem

Disability is at rise globally

Life with disability is challenging and difficult

Current Rehabilitation Mechanisms are limited, and tedious

**12 Lakh+**  
neurological  
patients suffer  
**Hand  
Disability**  
every year in  
India <sup>1,2</sup>



Dependency on care givers



Low self esteem



Social isolation and depression - **> 50%** of patients <sup>3</sup>



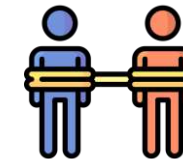
Reduced exercise duration – **< 50%** of required duration <sup>4</sup>



No real-time assessment of recovery progress and documentation



Inadequate monitoring of correctness of exercise



Excess dependency on physiotherapist



Not focused on fine movement training of hand

Early and effective rehabilitation is vital to restore hand functions and normal life quickly

<sup>1</sup> Pandian et al, J Stroke, 2013

<sup>2</sup> Langhorne et al, The Lancet, 2009

<sup>3</sup> <https://www.ucihealth.org/blog/2019/05/>

<sup>4</sup> Marwaha et al, IJPR, 2010



# Galanto's Solution



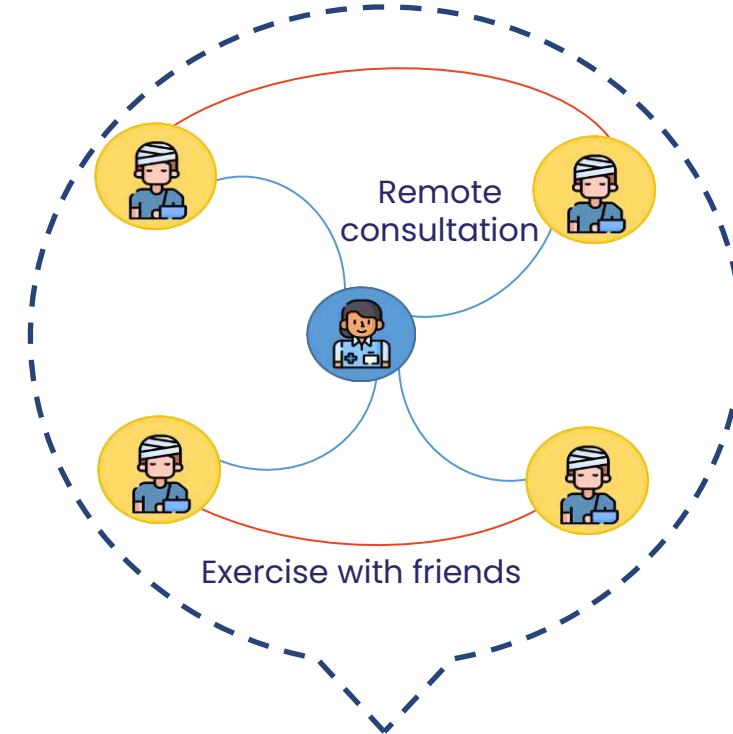
**Virtual Hand Rehabilitation and Assessment System**



**Gamified exercises**



**Reliable assessment**



## Patients

Increased exercise practice



Regular performance assessment



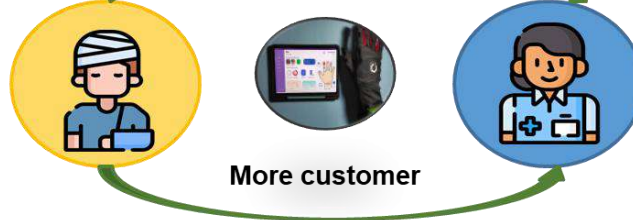
Autonomous training



Training and tracking fine finger movements



**Better service**



## Physiotherapists and doctors



Customer Engagement



Better tracking



Increased patient handling capacity



Save time



Huge database of stroke patients, movement and performance data  
-research, healthcare policies, insurance, targeted advertisement



# Galanto has Validated Prototype

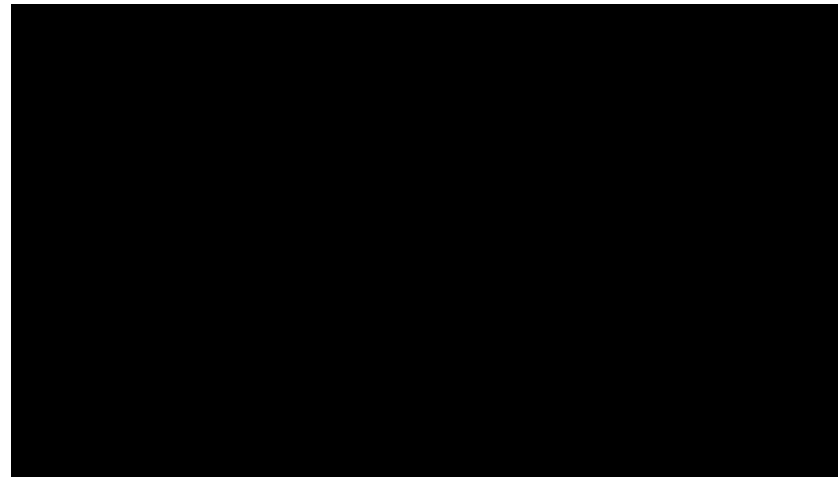
## Virtual rehabilitation and assessment system for **HAND**

### High performance Glove



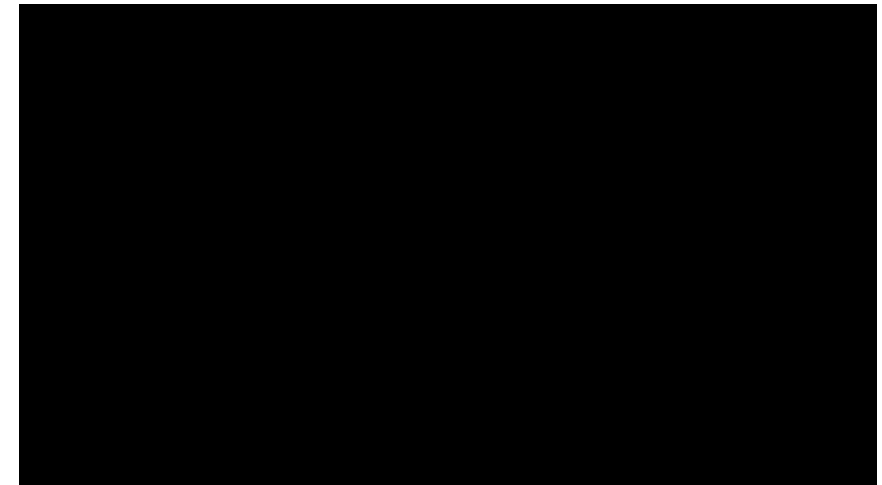
- ✓ **12** State-of-art motion sensors
- ✓ High resolution (**0.1°**)
- ✓ Fully wireless
- ✓ Easy to wear and remove

### Engaging Virtual exercises



- ✓ Exercises in form of **engaging games**
- ✓ Training for **activities of daily living**
- ✓ **Adaptive** difficulty level
- ✓ Auto **recommendation**

### Elegant Dashboard



- ✓ Track performance and **progress**
- ✓ Detailed **performance reports**
- ✓ Simple and **easy to use** UI
- ✓ Report sharing and **tele-rehab**





# Initial Validation has been Conducted

Dec 2021 - Aug 2022



**25** Doctors and Physiotherapists



**3** Hospitals and rehab centers performing trials

**3** Hospitals interested for trials



**20** Patients with stroke and hand surgery



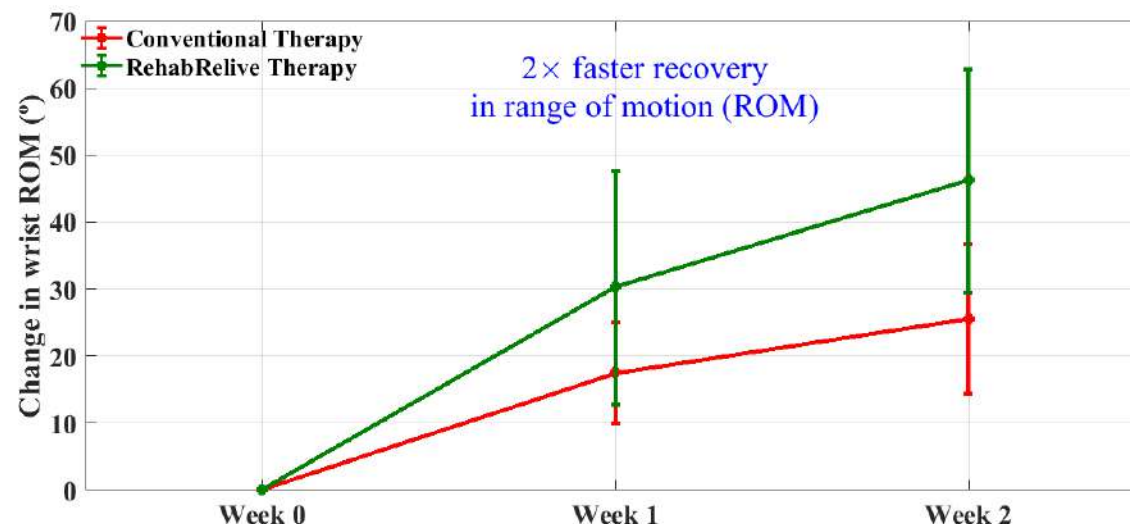
**6** Physio centers ready



**3** Orders received so far



**200%** Faster recovery seen in hand injury patients (15 sittings)



**90%** Adherence to exercise practice schedule



**In 10 days** Movement started in wrist and fingers in stroke patients (2 cases so far)



# Competitive Positioning

## USP



Rapael Glove

**Expensive**

Rs. 15 Lakhs



Handtutor Glove



Anika Glove



Flint Music Glove



**Our  
RehabRelive Glove**

**Affordable**

Rs. 1 Lakh

**High  
Accuracy/Resolution**

**Low  
Accuracy/Resolution**

**Limitations of existing products**

- **Poor sensitivity** – due to sensing technology used (flex sensors)
- **Expensive**
- **No reliable assessment** – more of a gaming system
- **Not widely available in India**
- **No multiplayer support**



### **Reliable Assessment**

*Accurate assessment of performance progress and movement quality*



### **One size for all**

*Same glove can be used on either hand by patients of different hand sizes*



### **Home Rehabilitation**

*Modular, simple and affordable*



### **Adaptive Virtual Exercises**

*Engaging and challenging experiences and games*



### **Multi-player support**

*Now exercise with your loved ones*



### **Teleconsultation**

*Offer remote consultation to patients*



# Galanto's Product receives Excellent user feedback



A patient giving us roses to thank us for helping her improve hand functions with our product

11 to 118° ROM in wrist over 220 minutes of training!



A 70-year old patient rejoicing after exercise session

No movement to 90° ROM in thumb over 200 minutes of training!







# Galanto's Target Stroke Market size is ₹ 300 Crore

Neurorehabilitation Devices Market Size to Garner  
USD 2,274.1 Million Revenue by 2025 at Substantial  
CAGR of 16.4%, Asserts Market Research Future  
(MRFR)

6,50,000<sup>1</sup>  
Stroke prevalent cases in India

5,500+  
No. of clinics/hospitals/Research labs related  
to physiotherapy in India

**TAM**  
₹ 2510 Crore+

**Total Addressable Market (TAM)**  
Based on Market willingness to pay

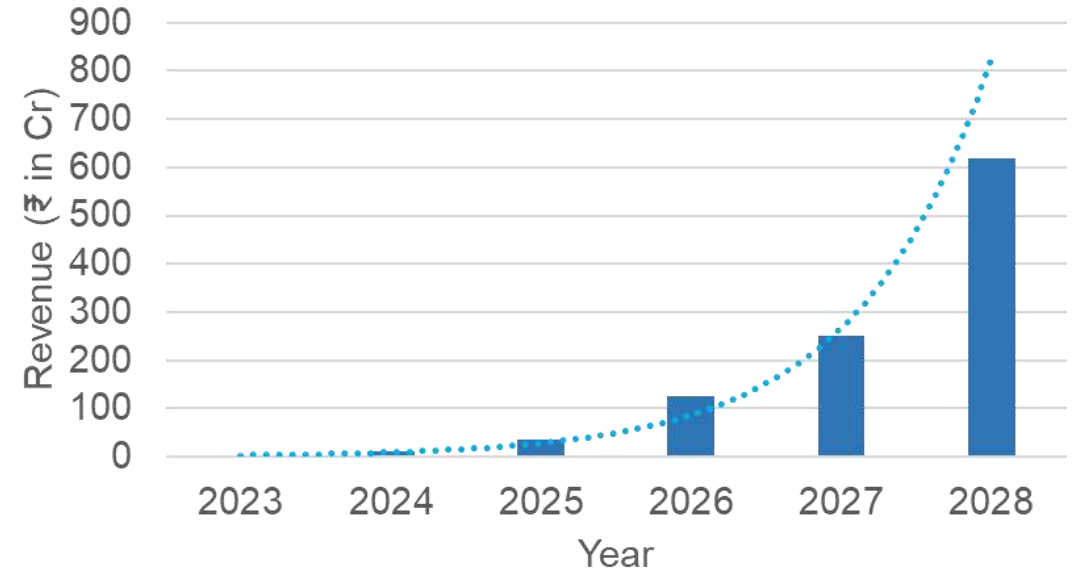
**SAM**  
₹ 740 Crore+

**Serviceable Addressable Market (SAM)**  
Higher segment of Hospitals/clinics  
and patients  
Assuming 30% of TAM

**Target Market**  
₹ 276 Crore+

**Target Market**  
Targeting 3000 Hospitals/clinics and  
40,000 patients over 5 years

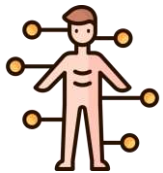
Cumulative Revenue Projection (₹ in Cr)



Medium	Model	Product	Price (INR)
Hardware (Sale) (One Time Purchase)	B2B & B2C	Glove + 6 Games	50,000
		Glove + 3 Games	25,000
Software (SaaS) Additional Games + Software updates + telerehabilitation (Subscription)	B2B	Monthly Plan (unlimited user plan)	2,000/ active user
	B2C (Single user)	Monthly Plan (single user plan)	500
		Yearly Plan (single user plan)	5,000
Rental Model	B2C	Glove + Tablet + Games	5,000 / month

# Galanto has promising future

## High scalability



### Full body motion capture

*Our sensor can capture motion of any part of body*



### Huge Virtual exercise library

*Users can subscribe to games from huge library*



### Teleconsultation

*Offer remote consultation to patients*



### Data currency

*Monetize the huge data collected using the system*



- ✓ Stroke patients
- ✓ Elderly Population
- ✓ Hand injury patients
- ✓ Cerebral Palsy
- ✓ Autism
- ✓ Arthritis



- ✓ Hospitals
- ✓ Rehabilitation Centers
- ✓ Old age homes



- ✓ Academics
- ✓ Rehabilitation Research
- ✓ Neuro motor Research
- ✓ Surgical/medical training



- ✓ Sports Rehabilitation centers
- ✓ Gaming and simulation industry

## Boundless possibilities

### Fully immersive virtual reality-based rehabilitation



### Robotic exoskeleton for assistive rehabilitation







# Galanto's Product bringing happiness to patient and family



A patient giving us roses to thank us for helping her improve hand functions with our product

11 to 118° ROM in wrist over 220 minutes of training!

## STARTUP TEAM FROM INSTITUTION CARRIES OUT SUCCESSFUL TRIALS AT CIVIL IIT-Gn alumni gamify hand physiotherapy

Parth.Shastri@timesgroup.com

Ahmedabad: A startup founded by alumni of IIT Gandhinagar (IIT-Gn) has developed a sensory glove to help patients with restricted finger and wrist movement to recover faster using virtual gamified exercises. The patient trials are being carried out successfully at the Government Spine Institute and Physiotherapy College on Civil Hospital campus. Dr Chandan Kumar Jha, the founder of the startup incubated at IIT-Gn and inventor of the glove, said that the project aims to develop indigenous systems for the rehabilitation of patients with hand disabilities using virtual reality (VR) and robotic technologies. He started on the project a year ago by founding Galanto Innovations with IIT-Gn colleague Rupesh Mulderjee.

Currently, the team has developed two games: one based on popular jump-and-run arcade games with which the majority of the patients are familiar, and another where the patient has to squeeze lemons in a glass. The first game is designed to exercise the up and down movement of the wrist, while the second is



(L) Dr Yagna Shukla and Dr Chandan Kumar Jha with a patient, (R) VR games

aimed at imitating the squeezing movement to improve grip. Other games include flipping a chapatti and gardening. Mohd Zaid Ropar, 29, a resident of Bapunagar, is getting physiotherapy at the spine institute for his right hand which he injured after a fall. "I fractured my finger and wrist. Initially, I was not sure about therapy. Though once I started playing the games, I got so immersed that I did not realize that I was exercising. The game format hooked

me, and motivated me to improve my previous score," he said. Dr Yagna Shukla, principal of the Physiotherapy College, said that the technology has given encouraging results with patients' involvement in the process and scientific data on their improvement. "While the glove doesn't fully replace the

conventional therapy methods, the glove augments it with reliable data," she said, adding that the use of technology would improve in the next few years. Jha said, "Compared to a few similar gloves for exercise available abroad, our product is much simpler to use and affordable. The games are calibrated to increase the difficulty level gradually."

Munir Bano, 47, who sustained a severe hand injury in a road accident, had two fingers re-attached and had frozen thumb movement. "Being a mobile phone user, I quickly followed the format and liked the feedback system," she said.



**ZERO hand movement for 2 years.**  
**50% recovery in 20 days using our product!**

# .....Thank You.....



A 70-year old patient rejoicing after exercise session

No movement to 90° ROM in thumb over 200 minutes of training!





# Smart wireless glove to detect complete hand and finger movements with high accuracy



## KEY FEATURES

- Fully wireless
- 12 state-of-art motion sensors
- Rechargeable battery
- 5 hours continuous operation
- Portable
- Easy to use
- Single button operation
- Lightweight (~ 200 grams)
- Can fit all hand sizes
- Breathable





# Dashboard – User onboarding

## Sign In

Recents

Chandan

Rupsha

Bhagwati

Vinod

>

Search

New User 

+

GALANTO

<

## Create New User

Name

Age

Weight

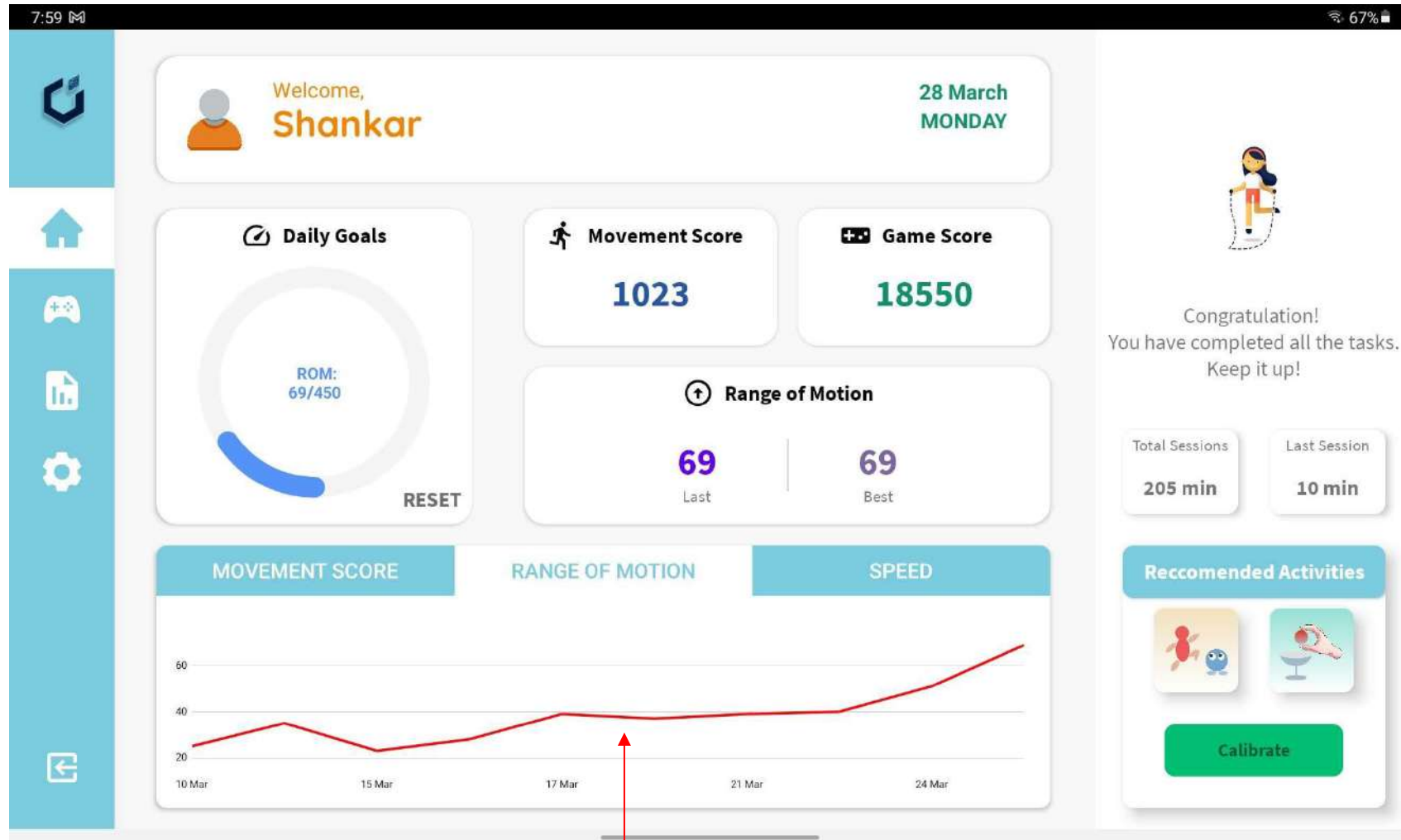
Gender

Hand Impaired

+



# Galanto's Product helps track recovery progress

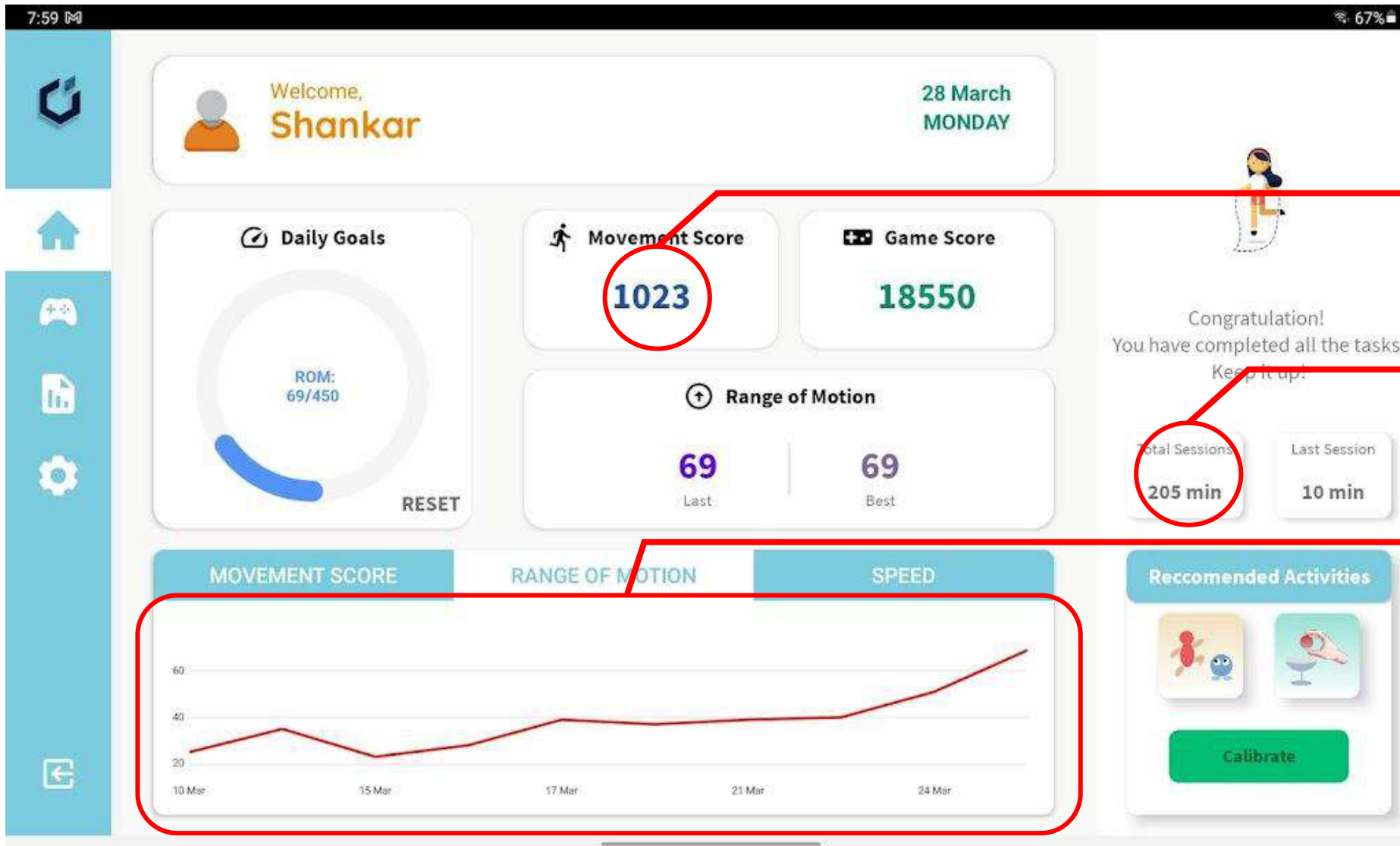


Tracking progress over time to encourage patients





# Easy-to-use dashboard to track performance



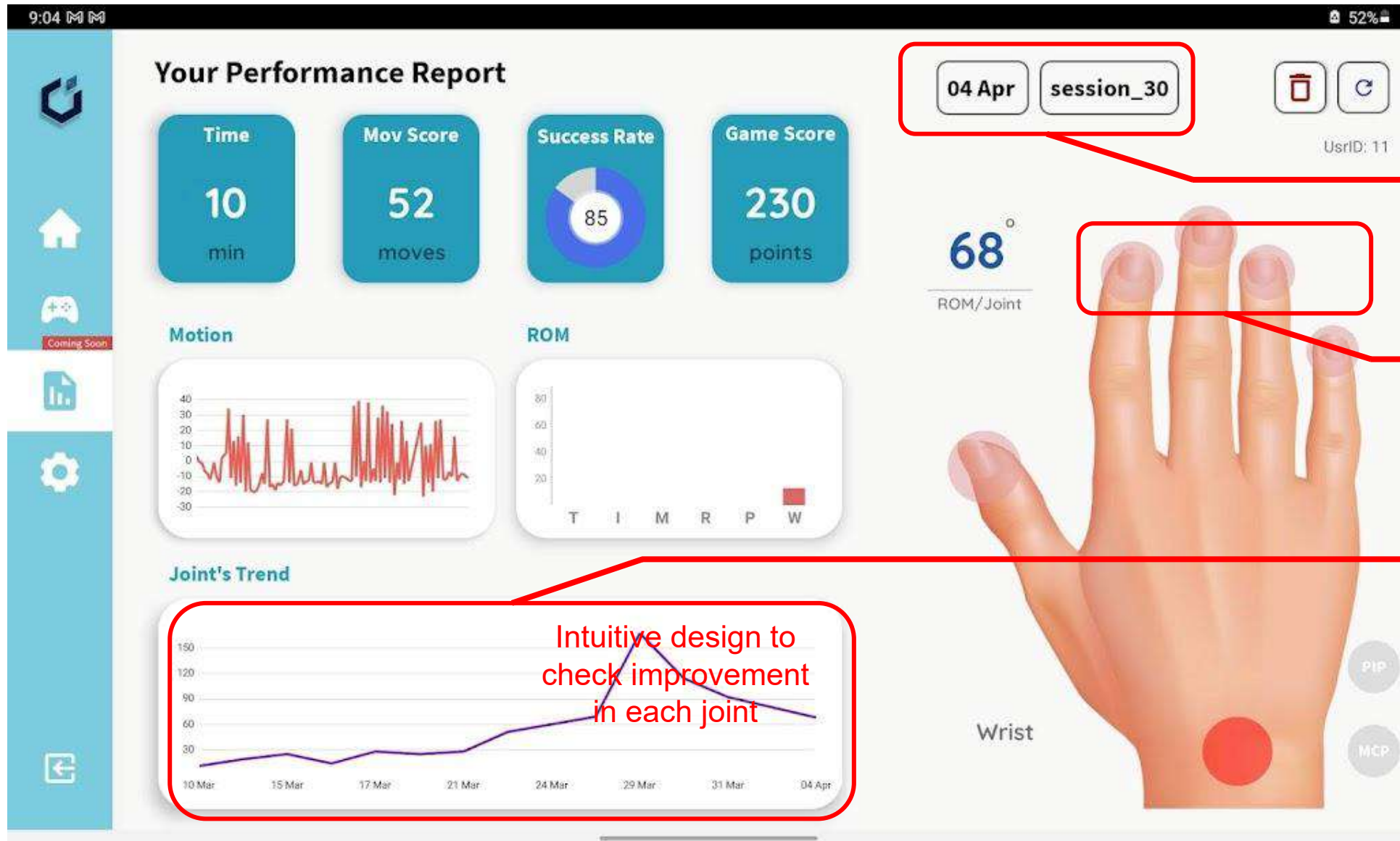
Total number of movements made

Total duration of exercise done

Tracking progress over time



# Easy-to-use dashboard to track performance



Detailed data for each day

Intuitive design to check improvement in each joint

Track improvement in each finger joint

Intuitive design to check improvement in each joint





# Galanto's Strives Continuous Improvement

**Version 1**  
November 2021



**Version 2**  
February 2022

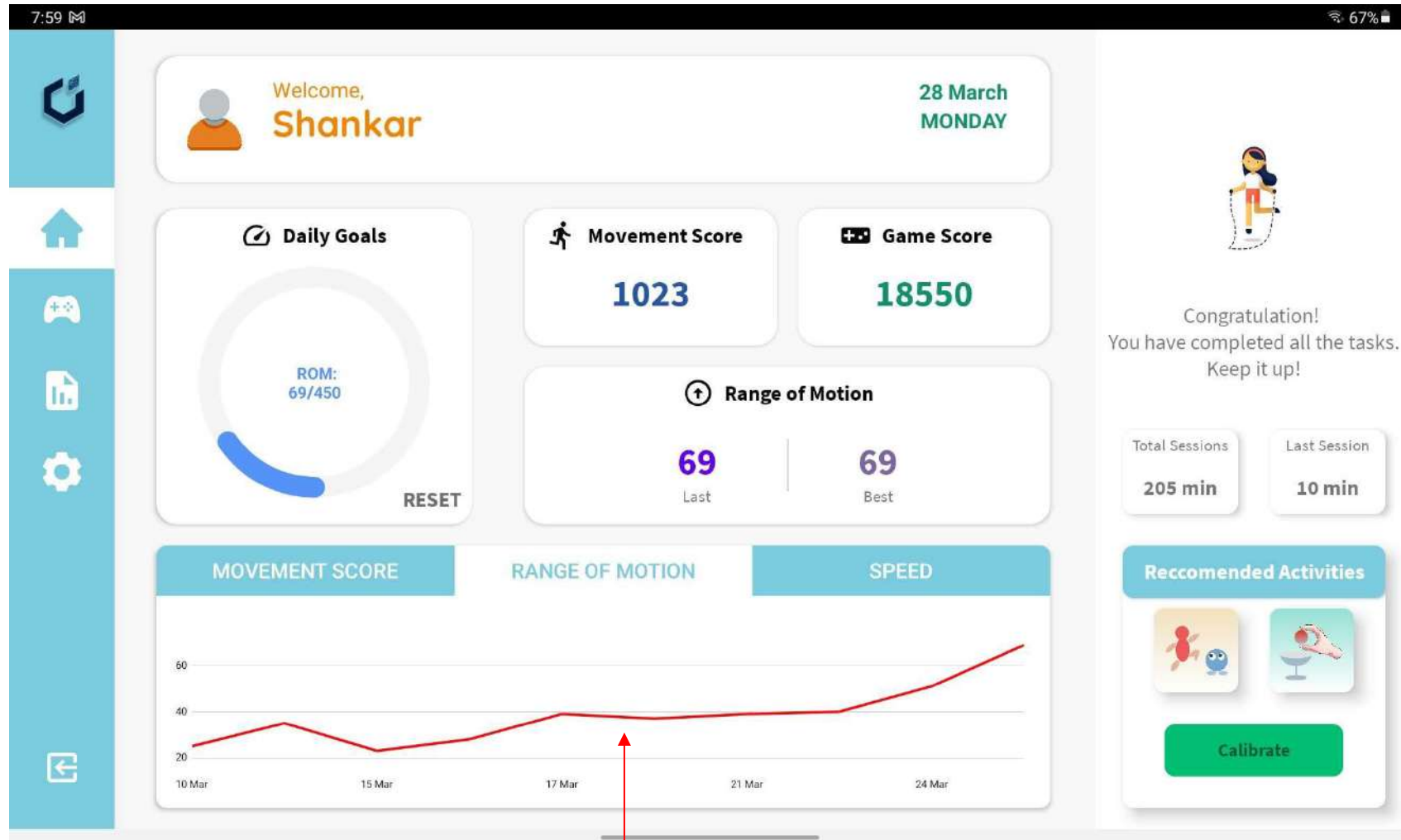


**Version 3**  
April 2022





# Galanto's Product helps track recovery progress



Tracking progress over time to encourage patients