



## **Mobile Fall Detection for Physical Therapists**

### **Vision Statement**

STOP! 36 million older Americans from falling  
down and getting hurt.

### **Mission Statement**

Automate fall risk screening tools in a mobile  
app for faster, less expensive fall risk  
detection.

**1000X fall risk detection**

# What Problem Does VisualPT Solve?

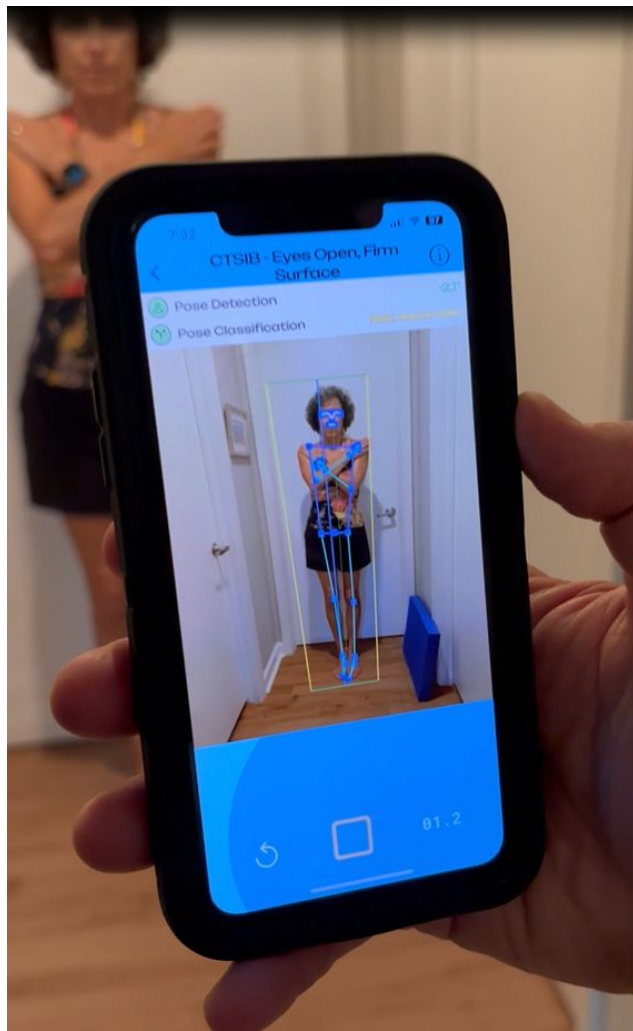
An epidemic of Falls in older people:

- Every 11 seconds an older person has a Fall with injury.
- E-room visits from a Fall cost \$14,165.87
- 1 in 4 older adults report falling every year.
- ~9 million falls with injury per year.



Dad

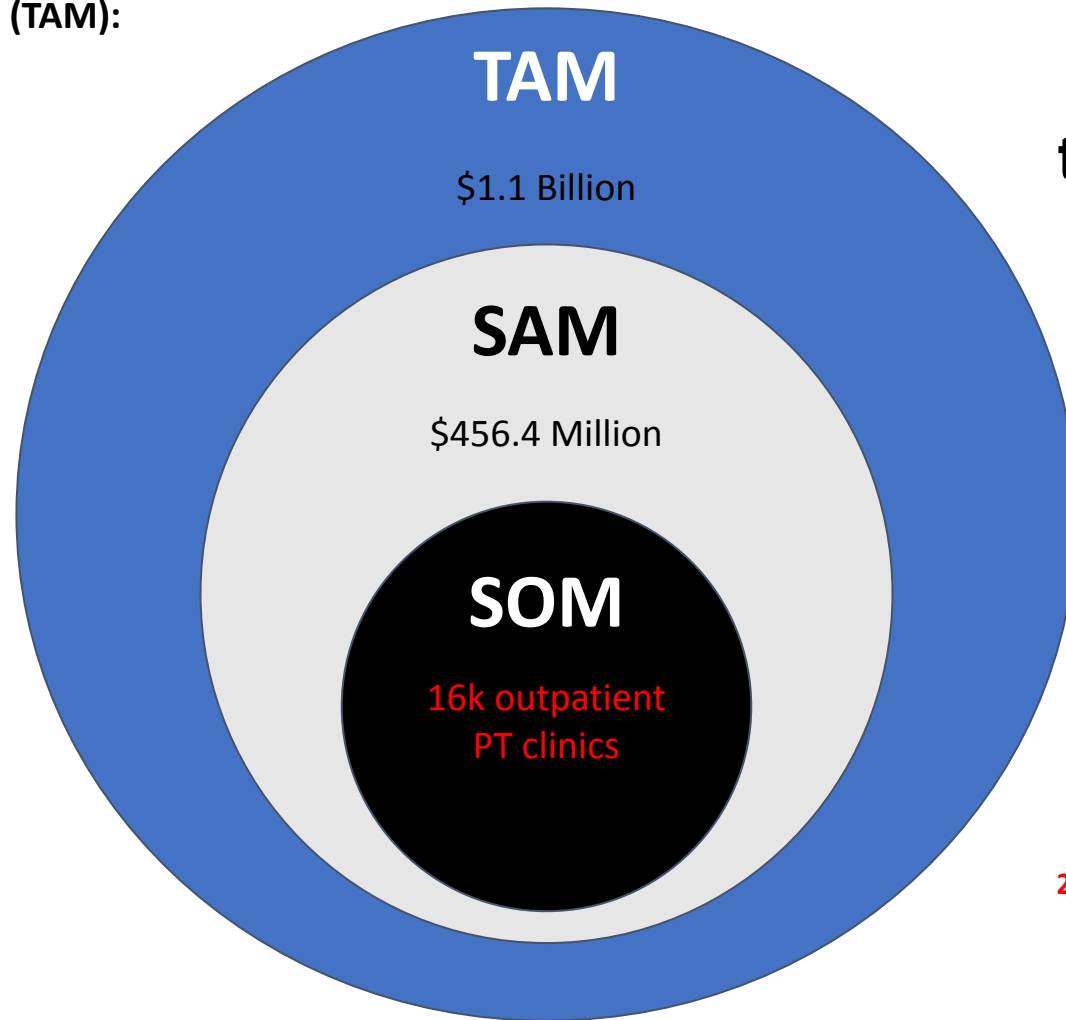




# Solution

A 2-minute assessment using  
**Computer Vision** to replace a  
20 minute pen-and-paper  
process.

# How Big is the Market?



## Total Addressable Market (TAM):

Global Physical Therapy  
software market

- \$1.1 billion

## Serviceable Available Market (SAM):

USA PT software

- \$456.4 million

## Serviceable Obtainable Market (SOM):

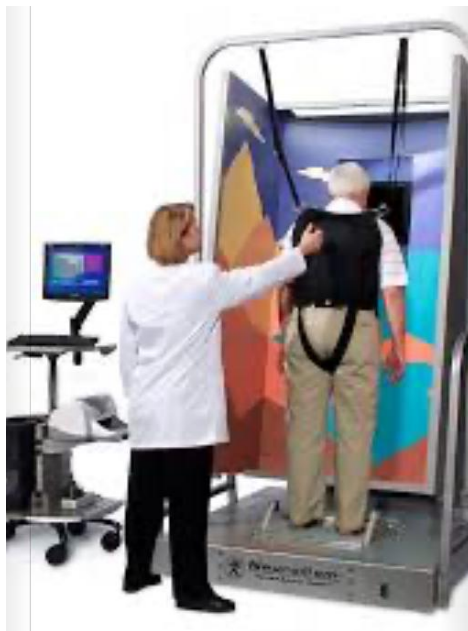
16,000 outpatient PT clinics  
22,000 skilled nursing facilities  
5,000 hospitals

# Competition

**Bertec:** Cost: \$87,000  
Time: 15 min.

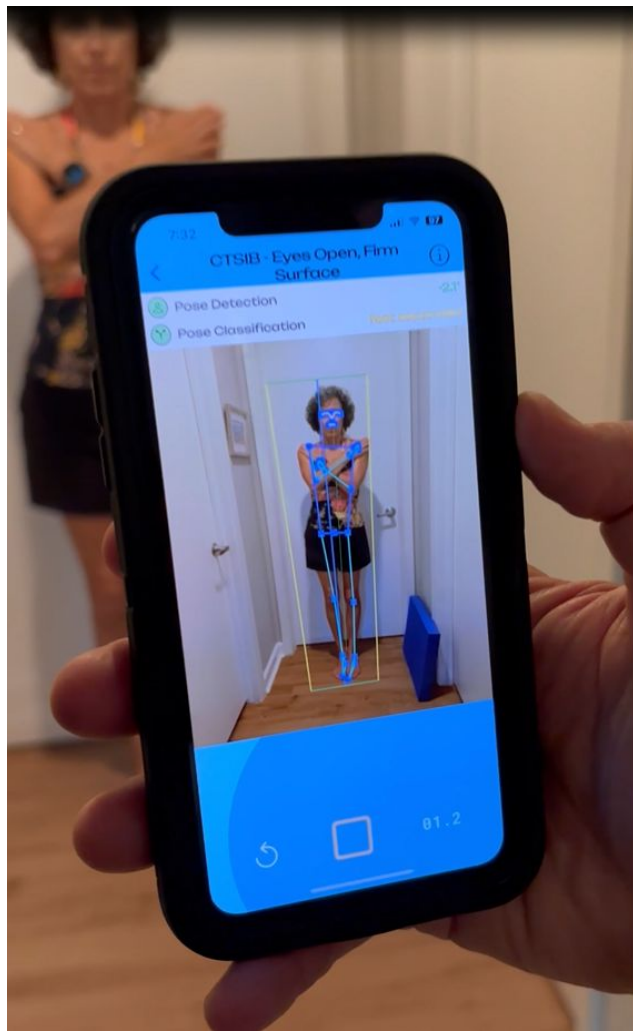


**Natus / NeuroCom:** \$20,000 (used)  
Time: 15 min.



**BodiTrak:** Cost \$5,000  
Time: 15 min.





# VisualPT.ai advantages

- 10x less expensive (\$50/mo. subscription)
- Mobile, not fixed.
- AI lets a 2D camera take 3D images
- No End User maintenance (Apple App store)
- Smaller & faster than force plates
- than force plates.
- Direct measure, not a calculation
- Direct link to EMR thru wireless API



# Outpatient Physical Therapy clinics

16,000 locations in the USA (market data)

X 10% market capture

=====

1600 locations in 2 years

X \$50 per licensed PT per month

(note: most locations have more than 1 PT)

=====

\$600 annual revenue per customer

X 1600 customers

=====

**\$960,000 annual revenue, 2 year run rate**

**10%  
market  
capture in  
24  
months**



# Regulatory Review



## HIPAA Compliant

- Trusted, third-party platform (AWS)
- 2-factor authentication
- NO patient data (names, emails, diagnoses, tec) are retained in the system.



## Food & Drug Administration

- Approval not needed. The app is a screening device, not a diagnostic device.



UF UNIVERSITY of FLORIDA

## Institutional Review Board (IRB)

“CTSIB is already a validated test; well-known in the PT community. At this time, there is no need for IRB approval to begin validation & data collection.”

- Dr. Mark Bishop, Chairman, UF Dept. of PT



UNITED STATES  
PATENT AND TRADEMARK OFFICE

uspto

Patent Pending

Provisional patent #: 65/658,829

Expiration date: June 11, 2025



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## ELECTRONIC PAYMENT RECEIPT

APPLICATION #  
63/658,829

RECEIPT DATE / TIME  
06/11/2024 08:36:08 PM Z ET

ATTORNEY DOCKET #  
-

### Title of Invention

VisualPT.ai Computer Vision tool

### Application Information

APPLICATION TYPE Utility - Provisional Application under  
35 USC 111(b)

PATENT # -

CONFIRMATION # 8669

FILED BY Charles Richardson

PATENT CENTER # 65926533

AUTHORIZED BY -

CUSTOMER # -

FILING DATE -

CORRESPONDENCE  
ADDRESS CHARLES T RICHARDSON,  
CHARLES T RICHARDSON  
14160 WELLINGTON TRCE  
WELLINGTON, FL 33414-8658  
US

FIRST NAMED  
INVENTOR Charles T Richardson

### Payment Information

PAYMENT METHOD  
CARD / 7783

PAYMENT TRANSACTION ID  
E20246AK39077623

PAYMENT AUTHORIZED BY  
Charles Richardson

FEE CODE	DESCRIPTION	ITEM PRICE(\$)	QUANTITY	ITEM TOTAL(\$)
3005	PROVISIONAL APPLICATION FILING FEE	60.00	1	60.00
TOTAL AMOUNT:				\$60.00

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

#### New Applications Under 35 U.S.C. 111

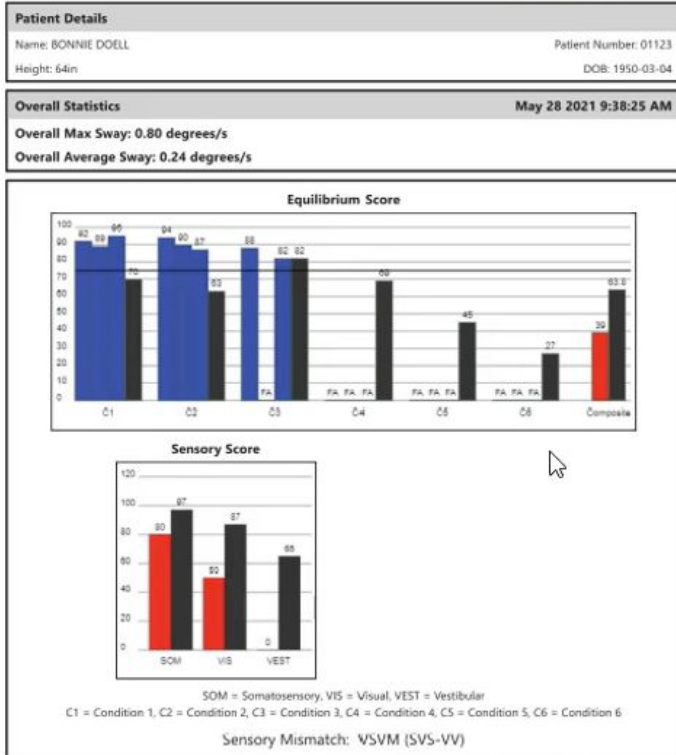
If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

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ions of 35 U.S.C.  
s a national stage

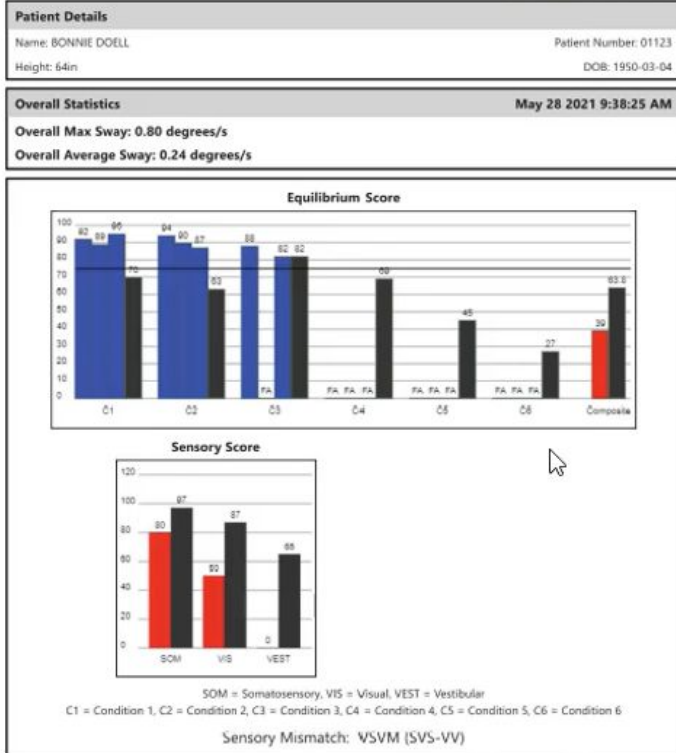
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Number and of the  
ing national security,  
ication.

# Written PDF Report



- **Insurance reimbursement:** Billable as CPT code 97750 = \$33.57 / unit
- Paid by Medicare.
- Identifies High Fall Risk Seniors
- Developer Roadmap - direct integration to EMR

# Written Report



**Composite: 63.8 (>48%)**

**Sensory Ratio: 3,3,2,0,1,1**

**Sensory Mismatch: SVSVV**

**Sensory Strategy: Visual Vestibular**

**Mismatch (VVM)**

**Start Point: C4-S1/D1**

# What is the Predicted exercise/activity?

## **VVM #13: C4-S1/D1**

Fixed vision (encourage use of the eyes)

Static surface - AirEx foam, wobble board, Bosu, Swiss ball

Dynamic surface - ground/floor

Base of Support:

- Feet - Normal to narrow
- Floor - Firm to compliant
- Arms/back - on to off surface

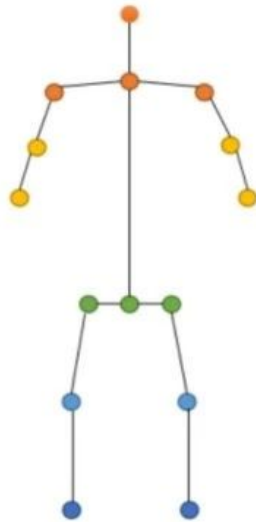
Single to 7 Head positions/PNF patterns, head clocks

# 6 month Roadmap

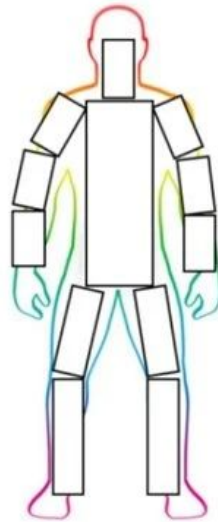
1.	<b>Z-axis (depth) measurement:</b> 50 hours =	\$2,000
2.	<b>Gyroscopic image stabilization:</b> 50 hours =	\$2,000
3.	<b>Add new PT/OT Tests:</b> 300 hours =	\$12,000
4.	<b>API to EMR Integration:</b> 500 hours =	\$20,000
5.	<b>Add Generative AI:</b> 500 hours =	\$20,000
		=====
		\$56,000

# Z-axis (depth) measurement

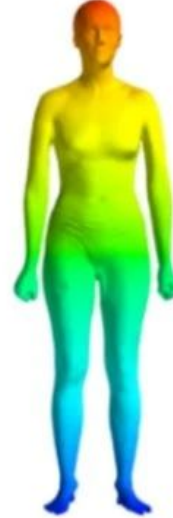
(Z-axis depth measurement in process)



(a) Kinematic



(b) Planar



(c) Volumetric

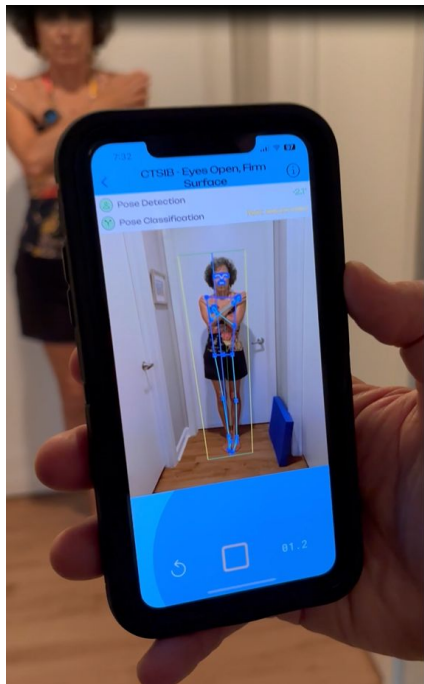
**Z-axis (depth) measurement:** 50 hours =

\$2,000



# Gyroscopic Image Stabilization

(without needing  
a tripod)



**Gyroscopic image stabilization:** 50 hours =

**\$2,000**

# Add New Tests

## Berg Balance Test

### Machine Learning model collapses 14

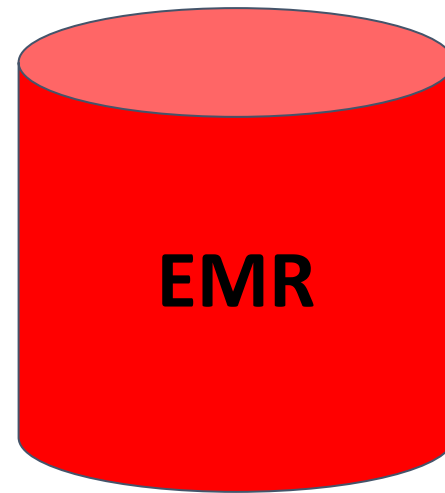
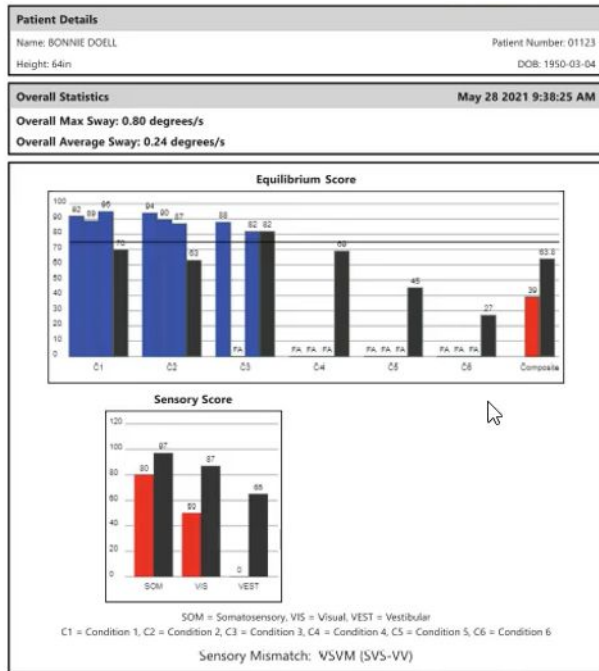
test items down to 4 items (1 already collected on the CTSIB).



Add new PT/OT Tests: 500 hours =

\$12,000

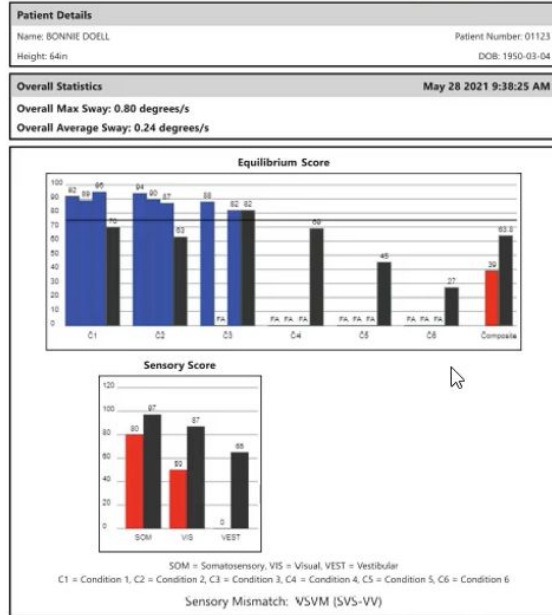
# Integrations



**API to EMR Integration: 500 hours =**

**\$20,000**

# Add Generative AI



Clinical PT Summaries  
auto-generated by LLM from  
data prompt.

**Add Generative AI:** 500 hours =

\$20,000

# Ask

A strategic & equity partner to:

- Finance near-term (< 12 mo.) Dev Roadmap = \$64k
- Scale Sales & Marketing beyond our franchise model (worldwide).

# Team



Charles Richardson, Founder

UI/UX front-end developer, software engineer, Python, Flutter, JavaScript



Holly Scott, Principal

Vice President & Partner at The Mullings Group | Global Medical Device & Life Sciences | Executive Search-Building Companies and Careers



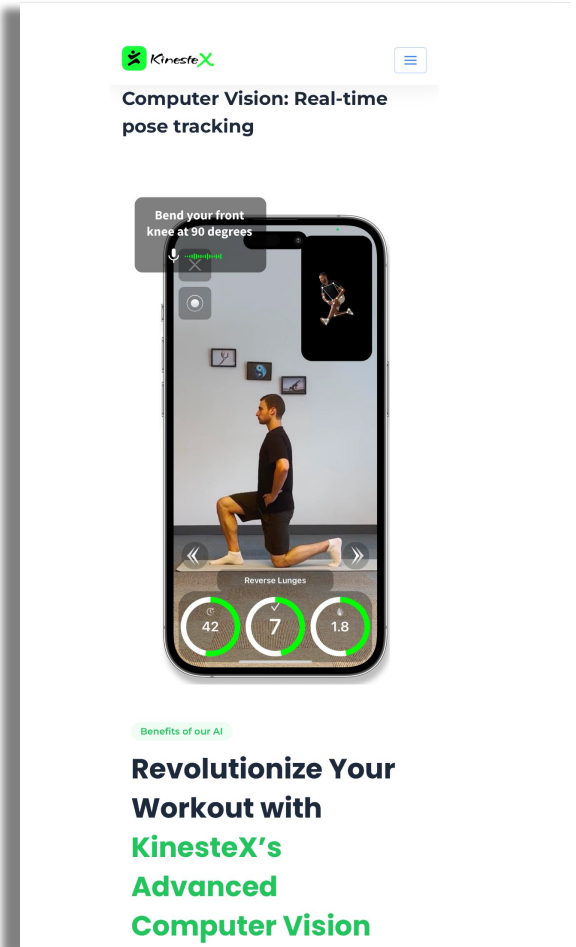
Tim Richardson, Consultant

Physical Therapist & Franchise Regional Consultant, FYZICAL LLC.  
Balance & vestibular expert, project manager

# Machine Learning Engineers

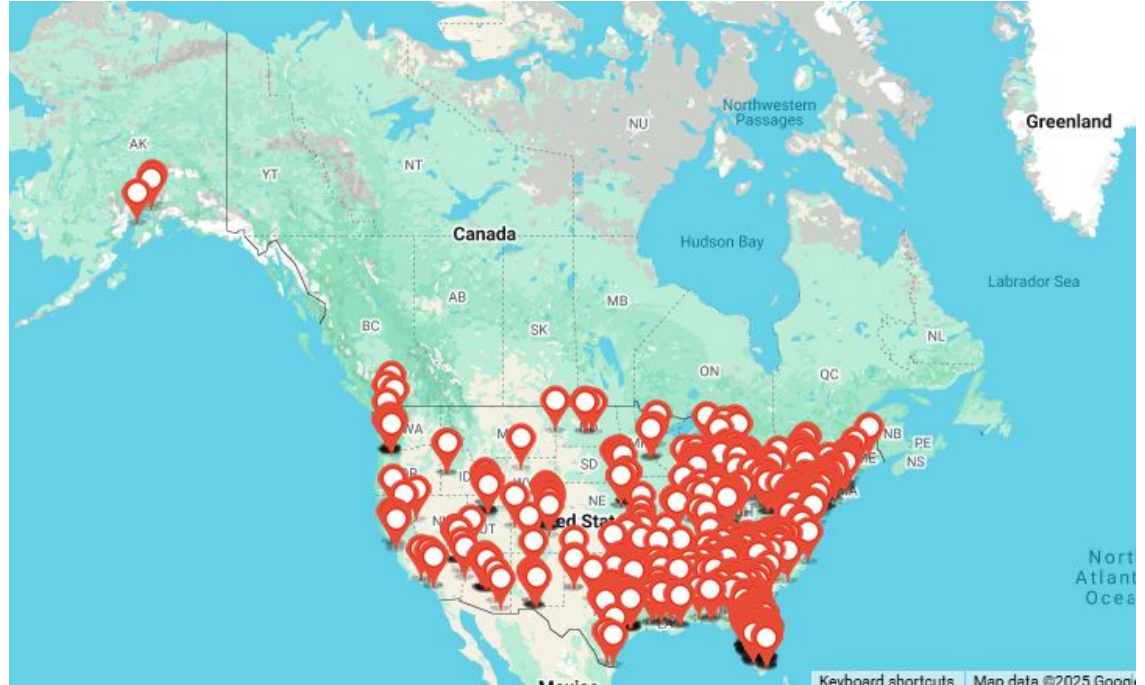
## Kinestex Co.

- 12 person team
- Based in Dubai
- Added Machine Learning to Whoop fitness watch





- 625 outpatient clinics in the USA
- Will not contest the IP.
- Strategic Partner Agreement



# Thank you!

Contact info:

Tim Richardson, PT

**CELL:** 1.941.623.6109

**Email:** [Tim.Richardson@VisualPT.ai](mailto:Tim.Richardson@VisualPT.ai)