# HUMANTRAK
M O V E M E N T   A N A L Y S I S   S Y S T E M

# PROFILE ASSESSMENT
Michele da Silva Pinto
16th January, 2024

## PROFILE INFORMATION

| NAME | Michele da Silva Pinto |
|---|---|
| ORGANISATION | On Morumbi Clinica Medica |
| DATE OF BIRTH | 11th November, 1986 |
| GENDER | Female |
| HEIGHT | 163cm / 64in |
| WEIGHT | 67kg / 148lb |
| AGE | 37 |

# Standing Posture
**Posture and Stability Assessment**

Standing Posture is a baseline postural assessment that can provide insight into an individual's structural balance, alignment, and postural strategy.
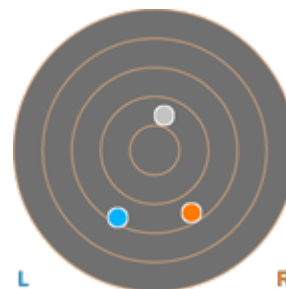
## RESULTS

### BALANCE SNAPSHOT



### SIDETRAK POSTURAL DEVIATION
(SAGITTAL PLANE/SIDE VIEW)



### KEY RESULTS

| | |
|---|---|
| Neck lateral flexion | 2.7° Right ▼ |
| Trunk lateral flexion | 0.2° Right ▼ |
| Pelvis Lateral Tilt | 0.0° Right ▼ |
| Trunk Flexion | 2.7° Posterior |

### SWAYTRAK MOVEMENT PATHS (KNEES AND CENTRE OF MASS)



## PRACTITIONER COMMENTS

HUMANTRAK
MOVEMENT ANALYSIS SYSTEM

## Cervical Spine Lateral Flexion
**Range of Motion Assessment**

Cervical Spine Lateral Flexion (left and right) is calculated by taking the inclination of the head relative to the line of the trunk in the frontal plane (front view).
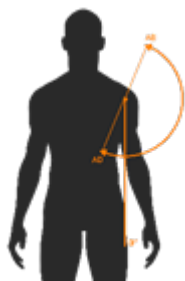
# RESULTS

| PEAK LEFT LATERAL FLEXION | PEAK RIGHT LATERAL FLEXION |
|---|---|
|  |  |

| KEY RESULTS | PEAK FLEXION (LEFT) | PEAK FLEXION (RIGHT) | IMBALANCE |
|---|---|---|---|
| Lateral Flexion | 13.6° | 13.4° | +0.2° |
| Trunk Flexion | 0.6° Posterior | 2.9° Posterior | N/A |
| Trunk lateral flexion at Peak Flexion | 1.9° Left ▼ | 0.0° Left ▼ | +1.9° |

## PRACTITIONER COMMENTS

HUMANTRAK
MOVEMENT ANALYSIS SYSTEM

# Shoulder Adduction/Abduction

**Range of Motion Assessment**

Shoulder Adduction/Abduction is calculated by taking the angle created by the humerus (upper arm) relative to the line of the trunk in the frontal plane (front view).

## RESULTS

| PEAK ADDUCTION | | PEAK ABDUCTION | |
|---|---|---|---|
| LEFT | RIGHT | LEFT | RIGHT |



| KEY RESULTS | LEFT | RIGHT | IMBALANCE |
|---|---|---|---|
| Shoulder Adduction | 22.3° | 9.0° | +13.4° |
| Shoulder Abduction | 175.5° | 175.2° | +0.3° |
| Trunk lateral flexion<br>at Peak Abduction | 2.8° Right ▼ | 2.1° Left ▼ | +0.8° |

**PRACTITIONER COMMENTS ( LEFT )**

**PRACTITIONER COMMENTS ( RIGHT )**

HUMANTRAK
MOVEMENT ANALYSIS SYSTEM

# Cervical Spine Flexion/Extension
**Range of Motion Assessment**

Cervical Spine Flexion (forward) / Extension (backwards) calculated by taking the inclination of the head relative to the line of the trunk in the sagittal plane (side view).

## RESULTS

| PEAK FLEXION SNAPSHOT | PEAK EXTENSION SNAPSHOT |
|---|---|



| KEY RESULTS | STARTING POSITION | PEAK FLEXION | PEAK EXTENSION | TOTAL RANGE |
|---|---|---|---|---|
| Flexion/Extension | 0.0° | 28.3° | 0.1° | 28.3° |
| Trunk Flexion | 3.4° Posterior | 5.7° Posterior | 5.9° Posterior | N/A |
| Trunk lateral flexion | 0.6° | 2.4° Left ▼ | 1.7° Left ▼ | N/A |

## PRACTITIONER COMMENTS

HUMANTRAK
MOVEMENT ANALYSIS SYSTEM

# Shoulder Flexion/Extension
**Range of Motion Assessment**

Shoulder Flexion/Extension is calculated by taking the angle created by the humerus (upper arm) relative to the line of the trunk in the sagittal plane (side view).

## RESULTS

| PEAK FLEXION | | PEAK EXTENSION | |
|---|---|---|---|
| LEFT | RIGHT | LEFT | RIGHT |
|  |  |  |  |

| KEY RESULTS | LEFT | RIGHT | IMBALANCE |
|---|---|---|---|
| Shoulder Flexion | 216.5° | 225.5° | +9.0° |
| Shoulder Extension | 51.4° | 39.1° | +12.4° |
| Trunk lateral flexion at Peak Flexion | 2.2° Right ▼ | 1.5° Left ▼ | +0.7° |

**PRACTITIONER COMMENTS ( LEFT )**

**PRACTITIONER COMMENTS ( RIGHT )**

HUMANTRAK
MOVEMENT ANALYSIS SYSTEM

# Shoulder Internal/External Rotation
**Range of Motion Assessment**

Shoulder Internal/External Rotation calculated by taking the angle created by the forearm relative to horizontal in the sagittal plane (side view).

## RESULTS

| PEAK INTERNAL ROTATION | |
|---|---|
| LEFT | RIGHT |



| PEAK EXTERNAL ROTATION | |
|---|---|
| LEFT | RIGHT |



| KEY RESULTS | LEFT | RIGHT | IMBALANCE |
|---|---|---|---|
| Shoulder Internal Rotation | 54.6° | 49.9° | +4.7° |
| Shoulder External Rotation | 100.4° | 99.6° | +0.8° |
| Total ROM | 154.9° | 149.5° | +5.4° |
| Trunk lateral flexion at Peak Internal Rotation | 1.0° Right ▼ | 2.7° Left ▼ | +1.7° |

PRACTITIONER COMMENTS ( LEFT )

PRACTITIONER COMMENTS ( RIGHT )

HUMANTRAK
MOVEMENT ANALYSIS SYSTEM

# Hip Internal/External Rotation
**Range of Motion Assessment**

Hip Internal/External Rotation is calculated by taking the angle created by the tibia relative to vertical in the frontal plane (front view) while seated with 90° of hip flexion.
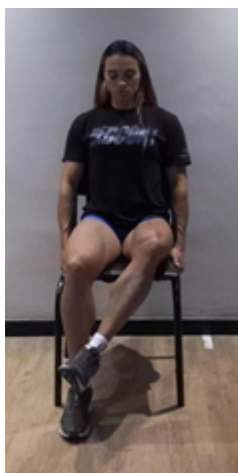
## RESULTS

| PEAK INTERNAL ROTATION | |
|---|---|
| LEFT | RIGHT |



| PEAK EXTERNAL ROTATION | |
|---|---|
| LEFT | RIGHT |



| KEY RESULTS | LEFT | RIGHT | IMBALANCE |
|---|---|---|---|
| Peak Internal Rotation | 23.8° | 26.6° | +2.8° |
| Peak External Rotation | 37.6° | 31.1° | +6.5° |
| Total ROM | 61.4° | 57.7° | +3.8° |

PRACTITIONER COMMENTS ( LEFT )

PRACTITIONER COMMENTS ( RIGHT )

HUMANTRAK
MOVEMENT ANALYSIS SYSTEM

# Single Leg Stand
**Balance Assessment**

Standing balance over time is assessed while standing on one leg.

| | |
|---|---|
| **Eyes** | Open |
| **Surface** | Stable |
| **Time** | 10.0 s |

# RESULTS

## BALANCE RESULTS (LEFT)
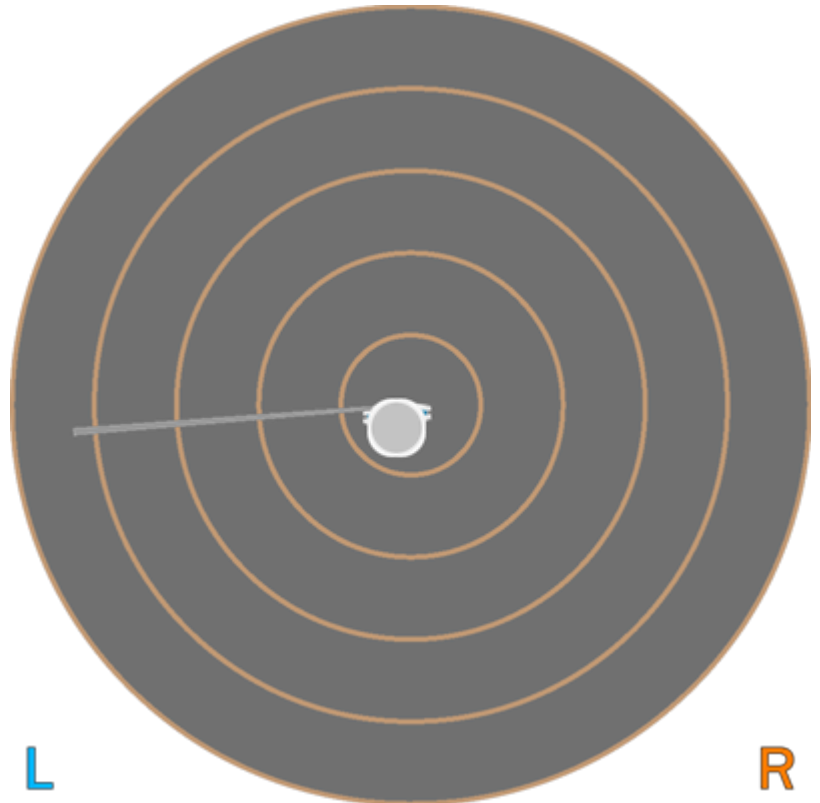
| SNAPSHOT – START OF TEST | CENTER OF MASS PATH |
|---|---|



| KEY METRICS | RESULTS |
|---|---|
| Ellipse Area | 0.16 cm-2 |
| COM Path Length | 12.01 cm |
| Range – ML | 1.16 cm |
| Range – AP | 2.11 cm |
| Pelvis Lateral Tilt | 8.3° Left ▼ |
| Trunk lateral flexion | 4.3° Left ▼ |

## PRACTITIONER COMMENTS

HUMANTRAK
MOVEMENT ANALYSIS SYSTEM

# Single Leg Stand
**Balance Assessment**

Standing balance over time is assessed while standing on one leg.

| | |
|---|---|
| **Eyes** | Open |
| **Surface** | Stable |
| **Time** | 10.0 s |

## RESULTS

<table>
<tr><td colspan="2" align="center"><strong>BALANCE RESULTS (RIGHT)</strong></td></tr>
<tr><td align="center">SNAPSHOT – START OF TEST</td><td align="center">CENTER OF MASS PATH</td></tr>
</table>



| KEY METRICS | RESULTS |
|---|---|
| Ellipse Area | 0.98 cm-2 |
| COM Path Length | 18.80 cm |
| Range – ML | 2.87 cm |
| Range – AP | 2.88 cm |
| Pelvis Lateral Tilt | 10.6° Right ▼ |
| Trunk lateral flexion | 5.9° Right ▼ |

## PRACTITIONER COMMENTS

HUMANTRAK
MOVEMENT ANALYSIS SYSTEM
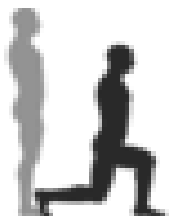
# Lunge

**Lower Body Dynamic Assessment**

The Lunge assesses the strength and range of motion of the knees and hips.

## RESULTS
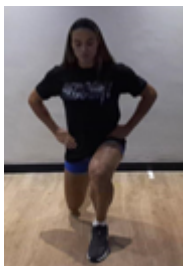
| PEAK KNEE FLEXION | |
|---|---|
| LEFT | RIGHT |



| KEY METRICS | LEFT LEG | RIGHT LEG | ASYMMETRY |
|---|---|---|---|
| **Peak Hip Flexion** | 71.0° | 67.5° | 4.9% |
| **Peak Knee Flexion** | 98.2° | 88.9° | 9.5% |
| **Peak Spine Lateral Tilt** | 2.4° Posterior | 0.7° Anterior | N/A |
| **Peak Pelvic Lateral Tilt** | 2.5° Right | 1.3° Right | N/A |
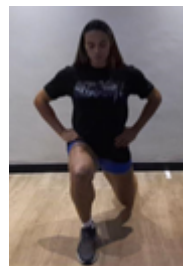
PRACTITIONER COMMENTS ( LEFT )

PRACTITIONER COMMENTS ( RIGHT )

HUMANTRAK
MOVEMENT ANALYSIS SYSTEM

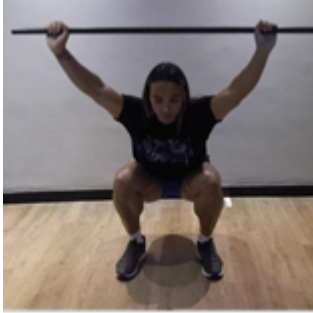# Squat

**Lower Body Dynamic Assessment**

Squat is a dynamic movement assessment providing insight into an individual's balance, stability, flexibility, and strength.

## RESULTS

| SNAPSHOTS | | | |
|---|---|---|---|
| START | REP 1: PEAK KNEE FLEXION | REP 2: PEAK KNEE FLEXION | REP 3: PEAK KNEE FLEXION |
|  |  |  |  |

| KEY RESULTS | REP 1 | REP 2 | REP 3 |
|---|---|---|---|
| Peak Knee Flexion ( Left ) | 104.5° | 104.5° | 105.1° |
| Peak Knee Flexion ( Right ) | 108.1° | 107.3° | 108.3° |
| Spine Tilt at Peak Knee Flexion | 43.4° Anterior | 40.9° Anterior | 41.5° Anterior |
| Trunk lateral flexion at Peak Knee Flexion | 0.5° Right ▼ | 0.2° Right ▼ | 0.7° Right ▼ |

## PRACTITIONER COMMENTS

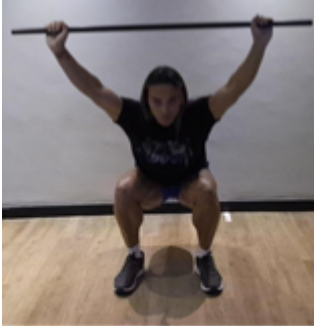HUMANTRAK
MOVEMENT ANALYSIS SYSTEM

# Overhead Squat
**Lower Body Dynamic Assessment**

Overhead squat is a dynamic movement assessment providing insight into an individual's balance, stability, flexibility, and strength.

# RESULTS

| SNAPSHOTS | | | |
|---|---|---|---|
| START | REP 1: PEAK KNEE FLEXION | REP 2: PEAK KNEE FLEXION | REP 3: PEAK KNEE FLEXION |
|  |  |  |  |

| KEY RESULTS | REP 1 | REP 2 | REP 3 |
|---|---|---|---|
| Peak Knee Flexion ( Left ) | 143.0° | 143.2° | 138.3° |
| Peak Knee Flexion ( Right ) | 145.5° | 142.0° | 136.1° |
| Trunk Flexion at Peak Knee Flexion | 33.1° Anterior | 34.2° Anterior | 38.1° Anterior |
| Trunk lateral flexion at Peak Knee Flexion | 0.5° Right ▼ | 2.4° Right ▼ | 3.6° Right ▼ |

## PRACTITIONER COMMENTS

HUMANTRAK
MOVEMENT ANALYSIS SYSTEM

# Countermovement Jump
**Lower Body Dynamic Assessment**

The Countermovement Jump assesses the landing posture during an explosive dynamic exercise.

## RESULTS

### KEY METRICS   (TORSO)

| Jump Height | 46.42 cm | |
|---|---|---|
| Peak Spine Tilt<br>after landing | 18.3° **Anterior** | |
| Peak Lateral Spine Tilt<br>after landing | 3° **Left** | |
| Peak Lateral Pelvic Tilt<br>after landing | 2.6° **Right** | |

| KEY METRICS   (LEGS) | LEFT LEG | RIGHT LEG | ASYMMETRY |
|---|---|---|---|
| Peak Hip Flexion<br>after landing | 56.0° | 54.6° | 2.5% |
| Peak Knee Flexion<br>after landing | 69.6° | 66.8° | 4% |
| Peak Knee Valgus/Varus<br>after landing | 15.9° **Varus** | 13.5° **Varus** | 14.9% |

### PRACTITIONER COMMENTS

HUMANTRAK
MOVEMENT ANALYSIS SYSTEM
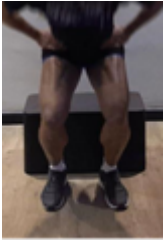
# Drop Jump
**Lower Body Dynamic Assessment**

Drop Jump is used to assess coordination, balance, joint stability and power, requiring the patient to drop from a box or platform and transition from landing into an explosive jump .

| Height | unspecified |
|---|---|

## RESULTS

| PHASE | Initial Contact | Peak Knee Flexion |
|---|---|---|
| SNAPSHOTS |  |  |
| **Result** | | |
| **Knee-Ankle Separation Ratio** | 1.1 | 1.3 |
| **Hip Flexion ( Left )** | 51.4° | 84.0° |
| **Hip Flexion ( Right )** | 49.2° | 80.8° |
| **Knee Flexion ( Left )** | 65.1° | 95.1° |
| **Knee Flexion ( Right )** | 62.7° | 91.7° |



## PRACTITIONER COMMENTS

HUMANTRAK
MOVEMENT ANALYSIS SYSTEM
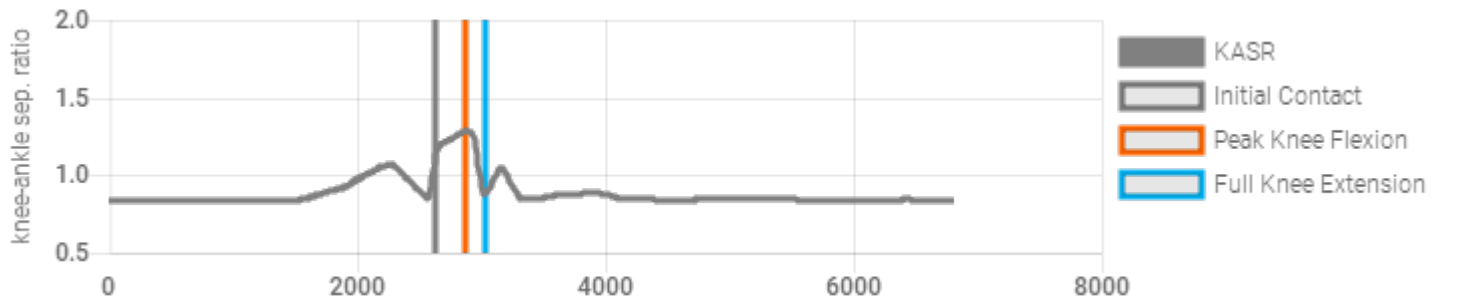
# Single Leg Squat
**Lower Body Dynamic Assessment**

Single Leg Squat is a dynamic movement assessment that provides insight into an individual's balance, stability, flexibility, and strength.

## RESULTS

| LEFT LEG | | | |
|---|---|---|---|
| **SNAPSHOTS** | | | |
| START | REP 1:<br>PEAK KNEE FLEXION | REP 2:<br>PEAK KNEE FLEXION | REP 3:<br>PEAK KNEE FLEXION |



| KEY RESULTS | REP 1 | REP 2 | REP 3 |
|---|---|---|---|
| Peak Knee Flexion | 91.5° | 97.8° | 107.1° |
| Knee Displacement (total) | 12.8 cm | 11.0 cm | 20.6 cm |
| Peak Knee Valgus | 0.3° **Valgus** | 0.0° | 0.0° |
| Peak Knee Varus | 7.7° **Varus** | 13° **Varus** | 17.9° **Varus** |
| Trunk lateral flexion<br>at Peak Knee Flexion | 3.3° Right ▼ | 2.2° Left ▼ | 5.2° Left ▼ |

## PRACTITIONER COMMENTS

HUMANTRAK
MOVEMENT ANALYSIS SYSTEM

# RESULTS

| RIGHT LEG | | | |
|---|---|---|---|
| **SNAPSHOTS** | | | |
| START | REP 1: PEAK KNEE FLEXION | REP 2: PEAK KNEE FLEXION | REP 3: PEAK KNEE FLEXION |



| KEY RESULTS | REP 1 | REP 2 | REP 3 |
|---|---|---|---|
| Peak Knee Flexion | 91.8° | 93.5° | 89.3° |
| Knee Displacement (total) | 11.7 cm | 12.1 cm | 17.5 cm |
| Peak Knee Valgus | 0.5° **Valgus** | 2.3° **Valgus** | 6.4° **Valgus** |
| Peak Knee Varus | 15.5° **Varus** | 9.5° **Varus** | 11.2° **Varus** |
| Trunk lateral flexion at Peak Knee Flexion | 9.1° Right ▼ | 5.2° Right ▼ | 3.8° Right ▼ |

## PRACTITIONER COMMENTS

HUMANTRAK
MOVEMENT ANALYSIS SYSTEM