

HANDS AND FINGERS TRACKING

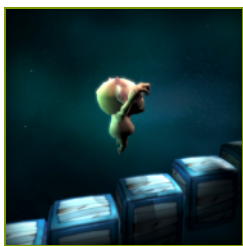
2025.1

Hardware requirements	3
What is needed?	3
Therapeutic tasks database	5
Speed	5
Movement precision	12
Functional movements	16
Divided attention	46
Memory	48
Problem solving	50
Specialized	52

WHAT IS NEEDED?

Please make sure the PC where you want this module to be active have VAST.Rehab Patient Panel installed and that the following hardware requirements are met:

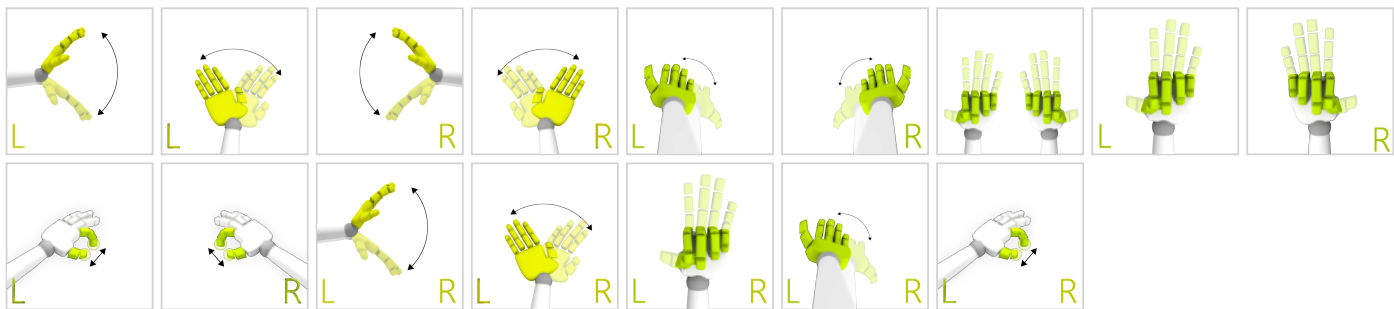
- Windows 10/11
- Intel Core i5 (8th gen or newer). Important: Avoid ultra-low-power versions (e.g., i5-8250U), as they may not meet performance requirements. Prefer standard or high-performance CPUs.
- Minimum: 8 GB RAM (16 GB or more recommended for optimal performance).
- NVidia GeForce 1050



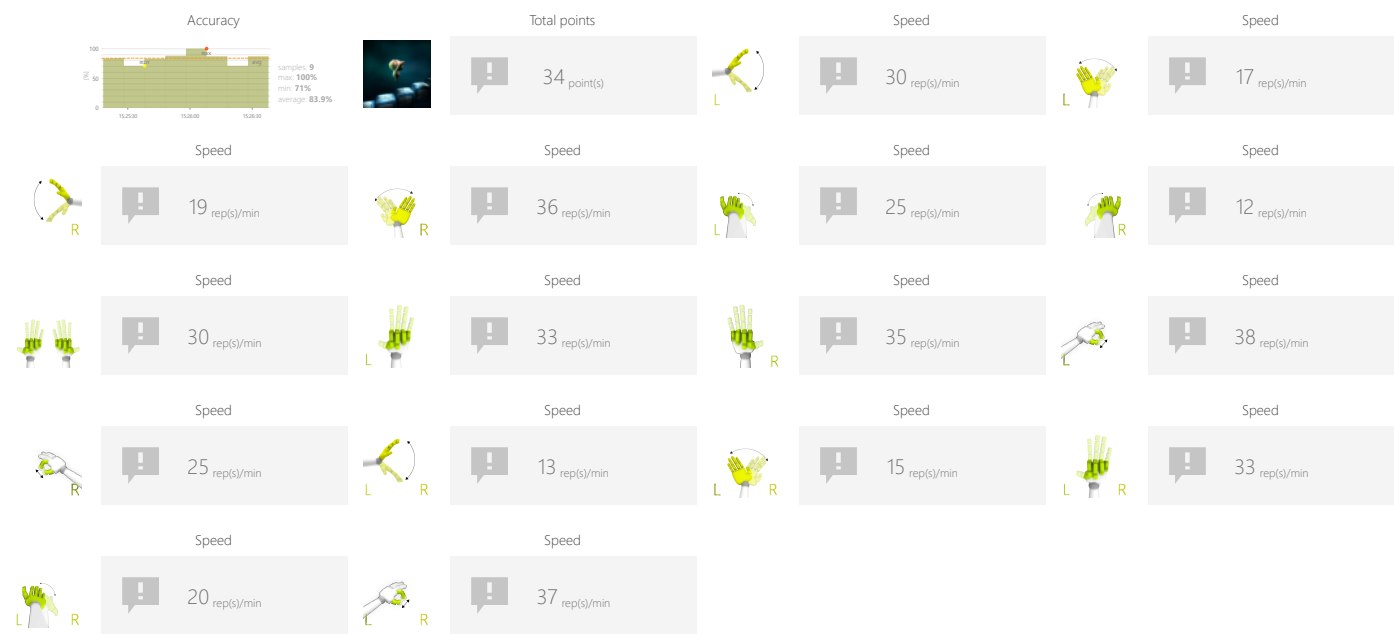
SPEED STAIRS

Measure number of repetitions of specific movement pattern an individual is able to perform within predefined time interval.

CONTROL MODES



RESULTS



ADJUSTMENTS

- Task duration
- Range
- Max time per floor
- Number of stairs
- Pause length

OBJECTIVES

- Dynamics of planned movements

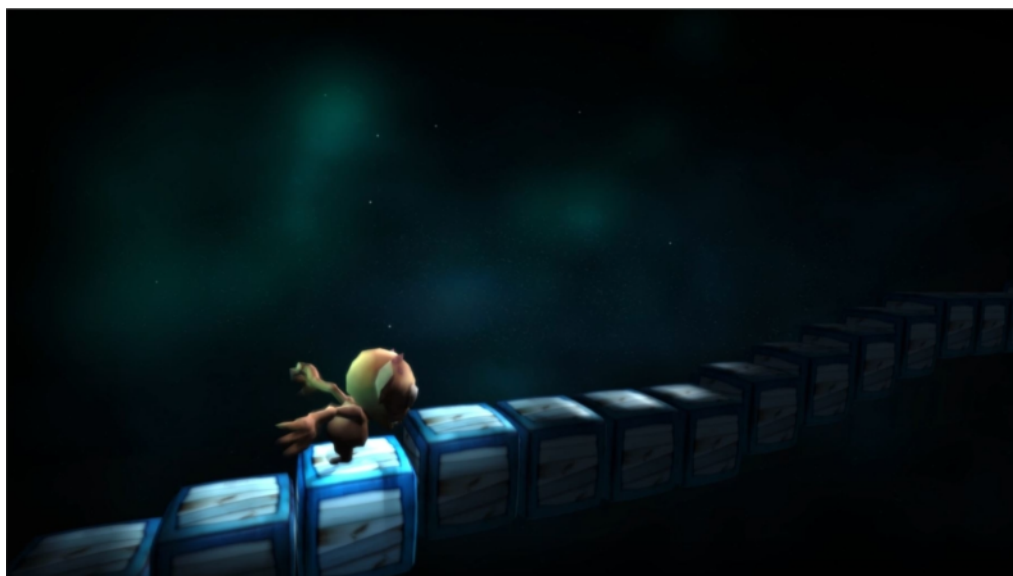
INSTRUCTION FOR PATIENT

Climb the stairs before they disappear.



SPEED STAIRS

SAMPLE SETTINGS



◀	Difficulty custom	▶
Duration < 90s >		Range 0% 100% ↕
Max time per floor < 15s >		Number of stairs < 5 >
Pause length < 3 >		

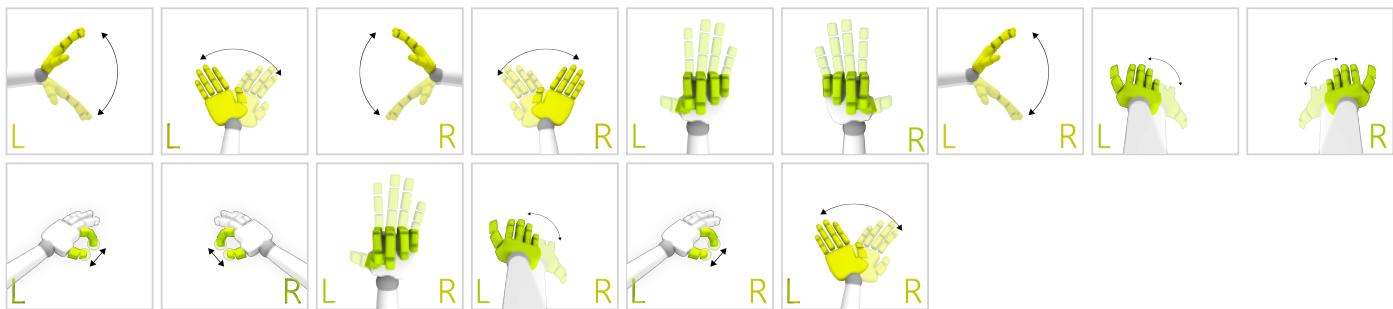


SPEED

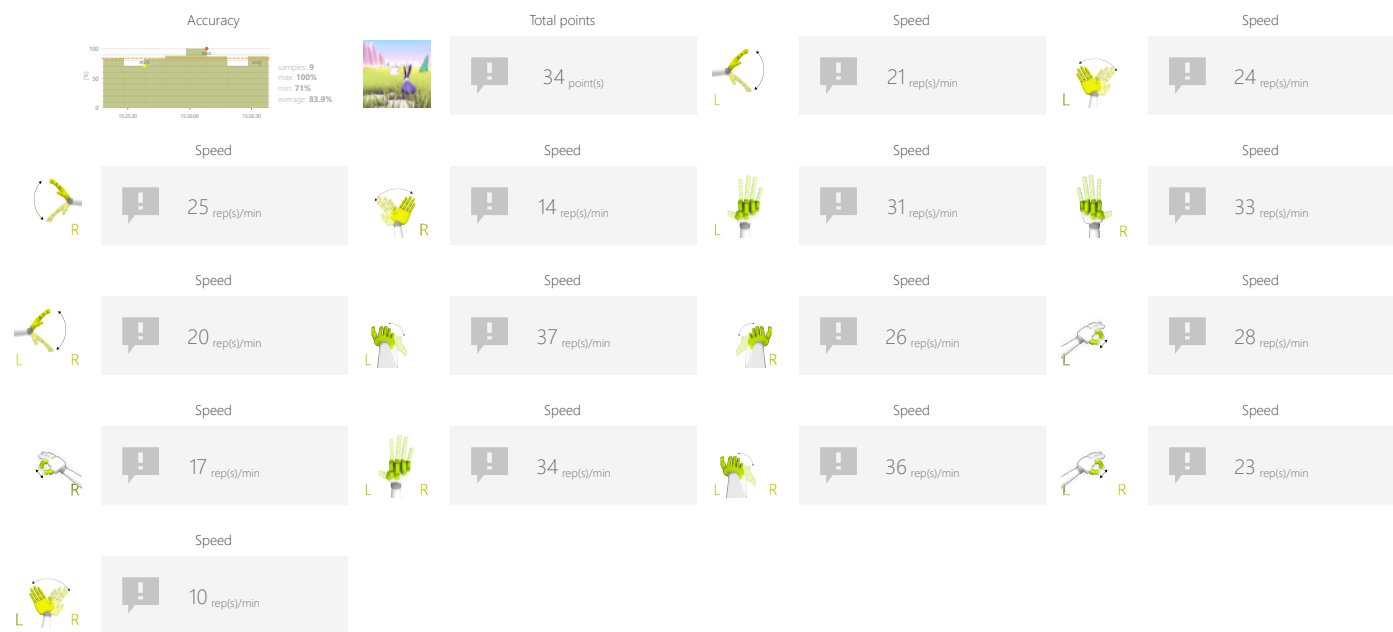
RABBIT

Measure number of repetitions of specific movement pattern an individual is able to perform within predefined time interval.

CONTROL MODES



RESULTS



ADJUSTMENTS

- Task duration
- Range

OBJECTIVES

- Speed of movement
- Repetitive movements

INSTRUCTION FOR PATIENT

Go through the entire route as fast as you can.



SPEED RABBIT

SAMPLE SETTINGS





CONTROL MODES



- ## OBJECTIVES

- INSTRUCTION FOR PATIENT

9



SAMPLE SETTINGS



Duration	Range
< 90s >	< 0% ↔ 100% >

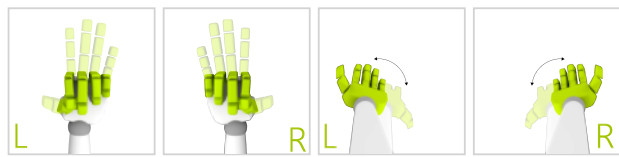


SPEED

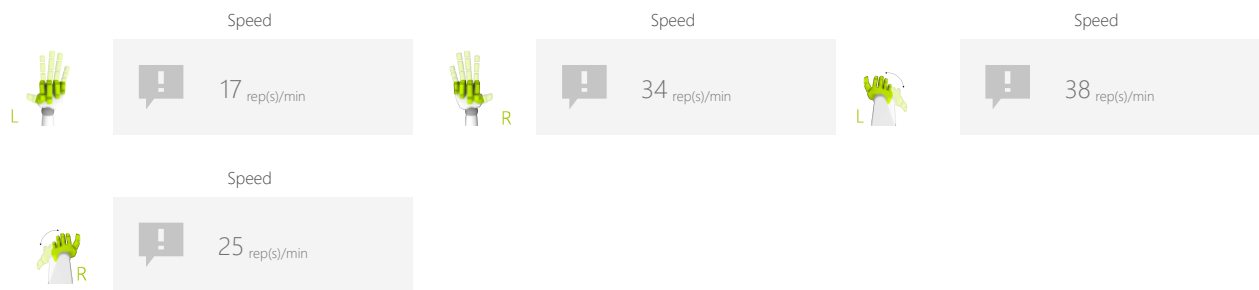
SPEED TEST

Measure number of repetitions of specific movement pattern an individual is able to perform within predefined time interval.

CONTROL MODES



RESULTS



ADJUSTMENTS

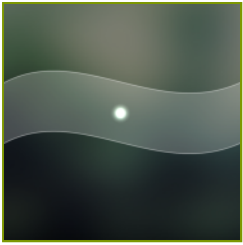
- Time to complete action
- Range

OBJECTIVES

- Speed of movement
- Repetitive movements

INSTRUCTION FOR PATIENT

Perform the specified movement pattern as many times as possible.

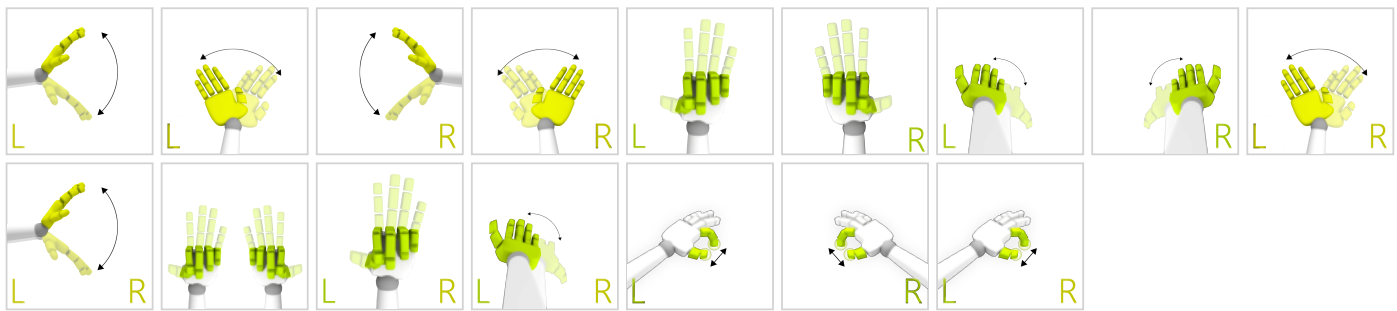


MOVEMENT PRECISION

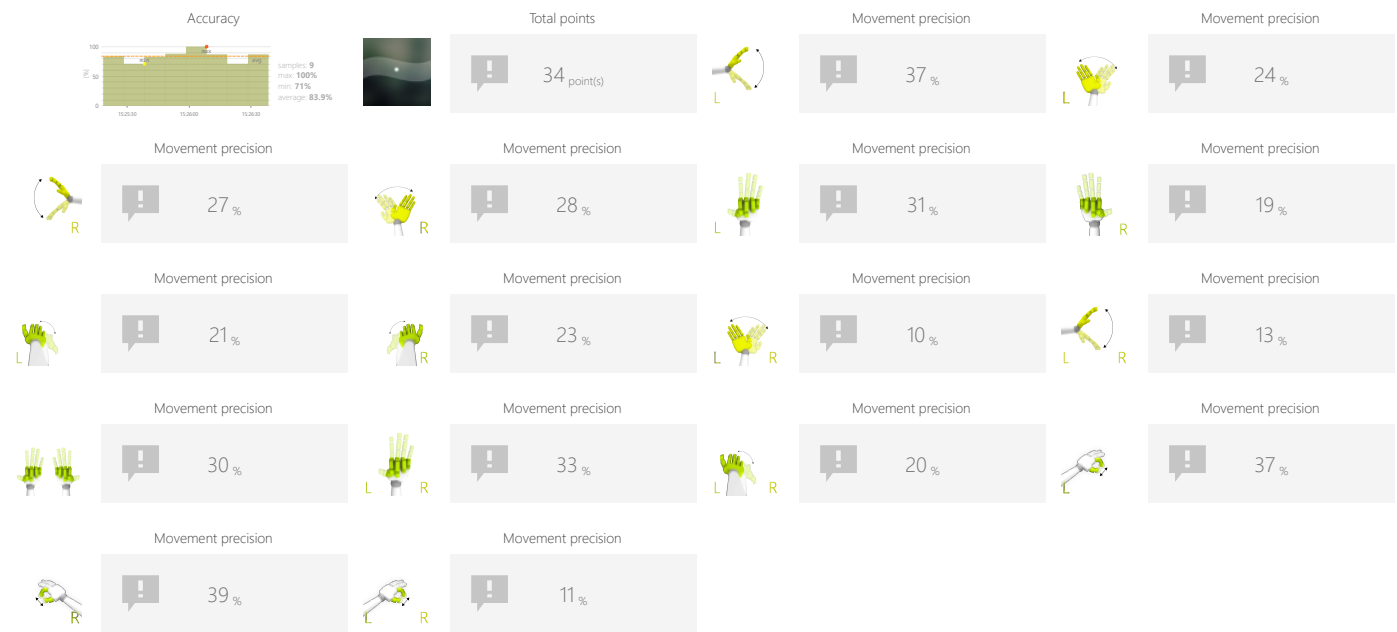
GRAPH

Measure and train individual's skills to perform specific movement patterns with predefined speed and range.

CONTROL MODES



RESULTS



ADJUSTMENTS

- Graph shape (sinus or square, amplitude, border, etc.)
- Task duration
- Range

OBJECTIVES

- Movement precision
- Activity in a given rhythm
- Repetitive movements

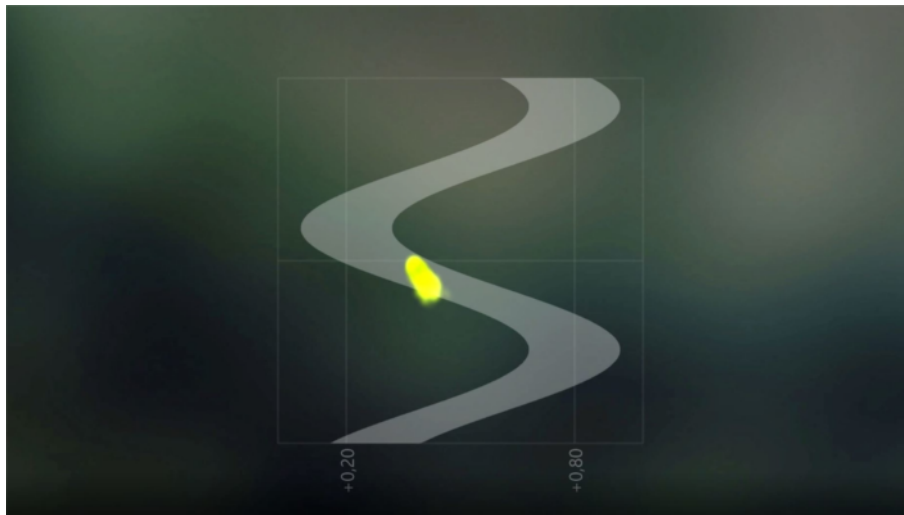
INSTRUCTION FOR PATIENT

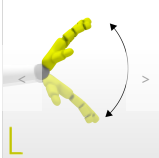
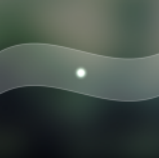
Try to stay within the borders.



MOVEMENT PRECISION GRAPH

SAMPLE SETTINGS






◀

Difficulty

▶

3/3

Graph configuration



⌚ : 4.0s ± : 20%

Duration


◀

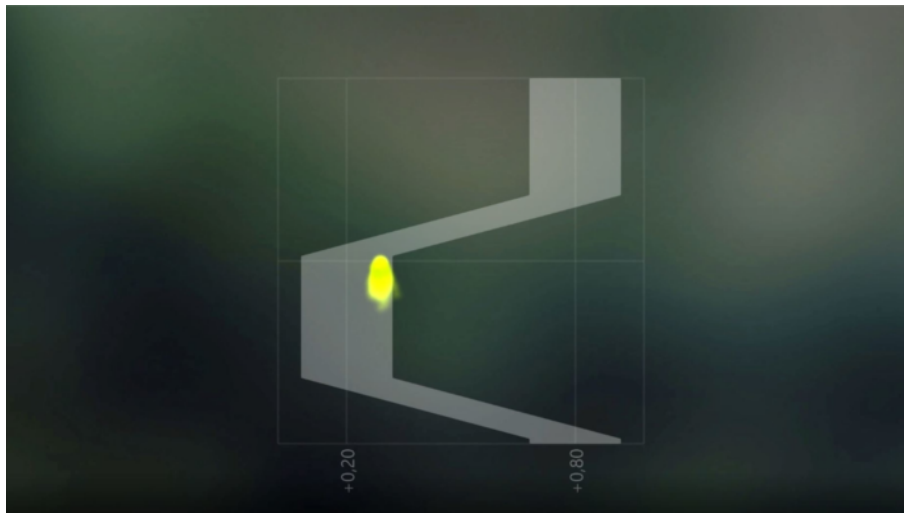
30s

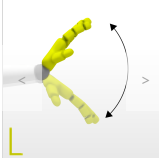
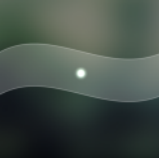
▶

Range

0% 100%








◀

Difficulty

▶

1/3

Graph configuration



⌚ : 4.0s ± : 40%

Duration


◀

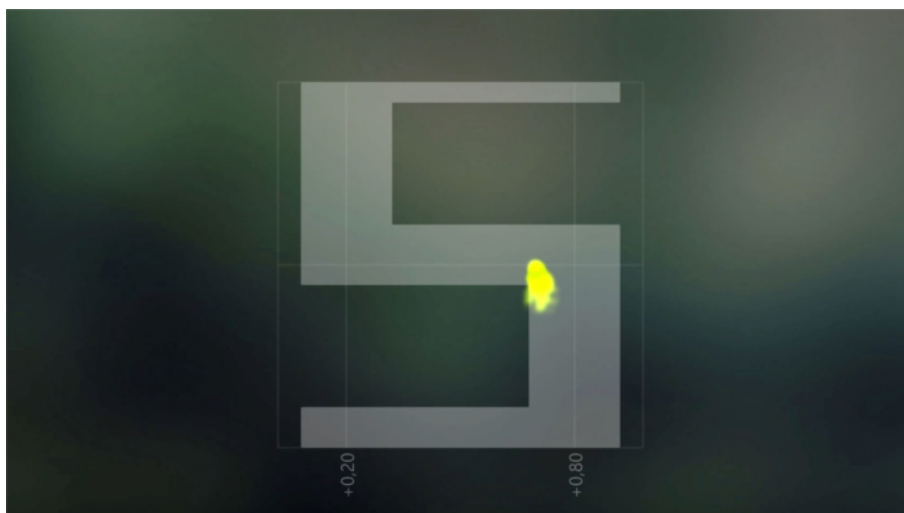
90s

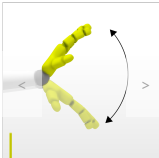
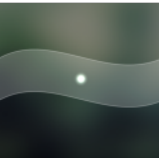
▶

Range

0% 100%







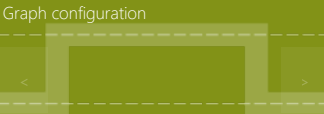
◀

Difficulty

▶

custom

Graph configuration



± : 20% ↑ : 2.0s ↓ : 2.0s ↗ : 1.0s ↘ : 1.0s

Duration


◀

30s

▶

Range

0% 100%





MOVEMENT PRECISION

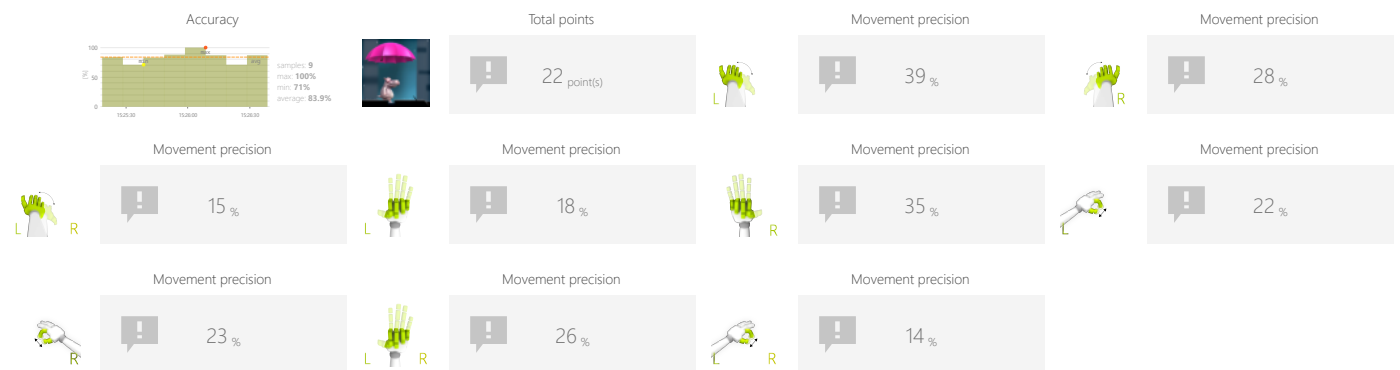
UMBRELLA

Measure and train individual's skills to perform specific movement patterns with predefined speed and range.

CONTROL MODES



RESULTS



ADJUSTMENTS

- Task duration
- Path
- Range
- Umbrella size

OBJECTIVES

- Movement precision
- Visual motor coordination

INSTRUCTION FOR PATIENT

Don't let the hippo get wet - keep the umbrella above him!

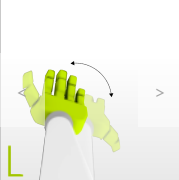



MOVEMENT PRECISION

UMBRELLA

SAMPLE SETTINGS





◀

Difficulty
1/3

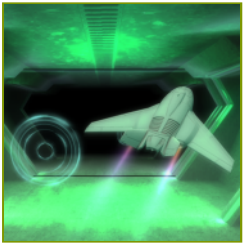
▶

Duration
60s

Path
8.0s

Range
80% ↔ 20%

Umbrella size
150%

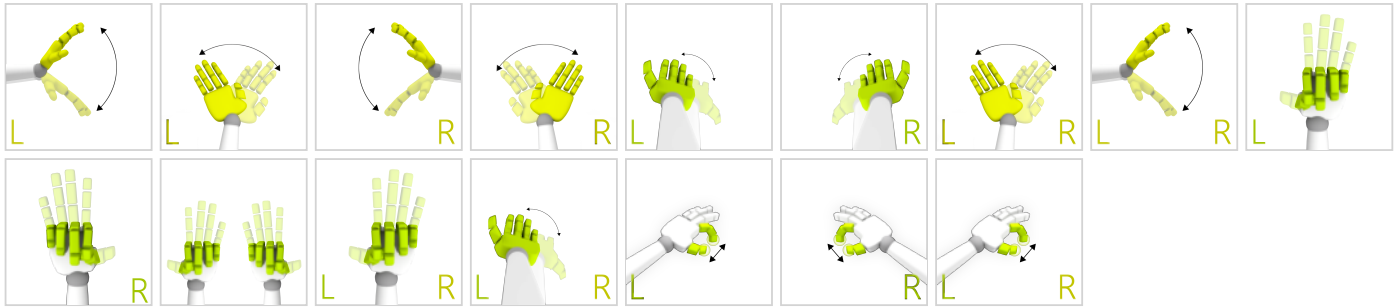


FUNCTIONAL MOVEMENTS

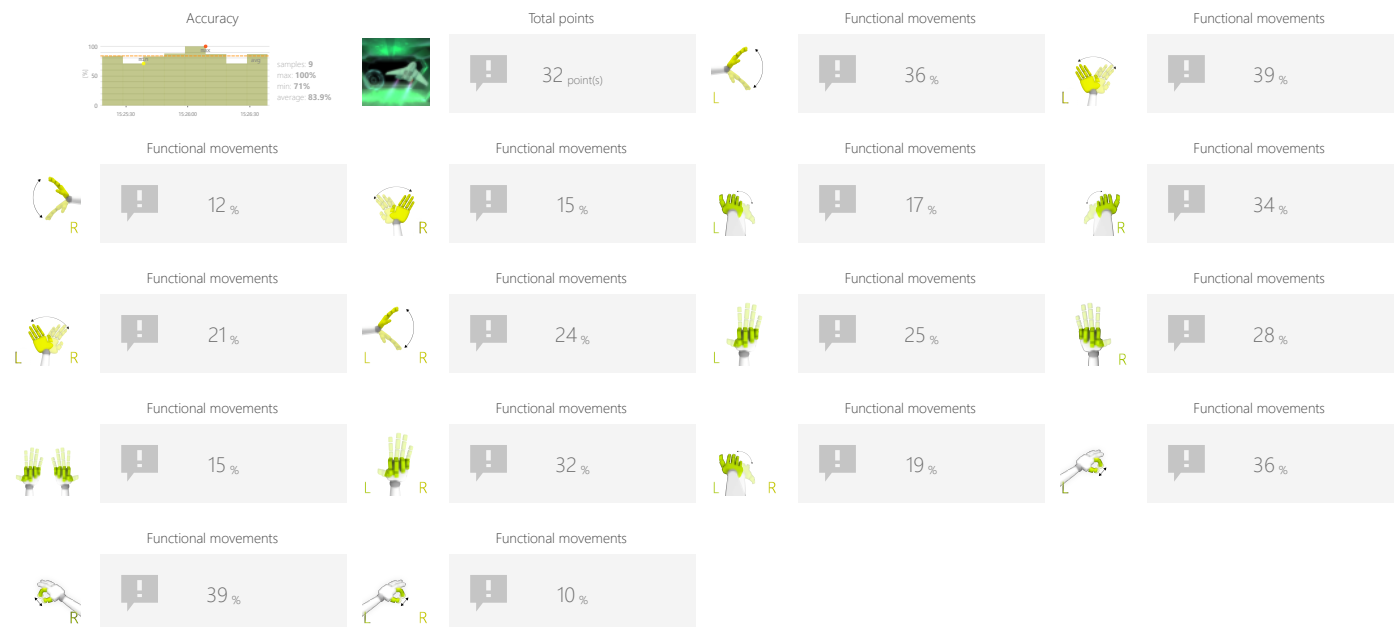
AIRPLANE

Measure and train individual's skills to perform movements based on real-world situational biomechanics. They usually involve multi-planar, multi-joint movements which place demand on the body's core musculature and innervation.

CONTROL MODES



RESULTS



ADJUSTMENTS

- Speed
- Task duration
- Range

OBJECTIVES

- Focusing
- Perceptivity
- Movement precision
- Predicting the trajectory of objects in 3D space

INSTRUCTION FOR PATIENT

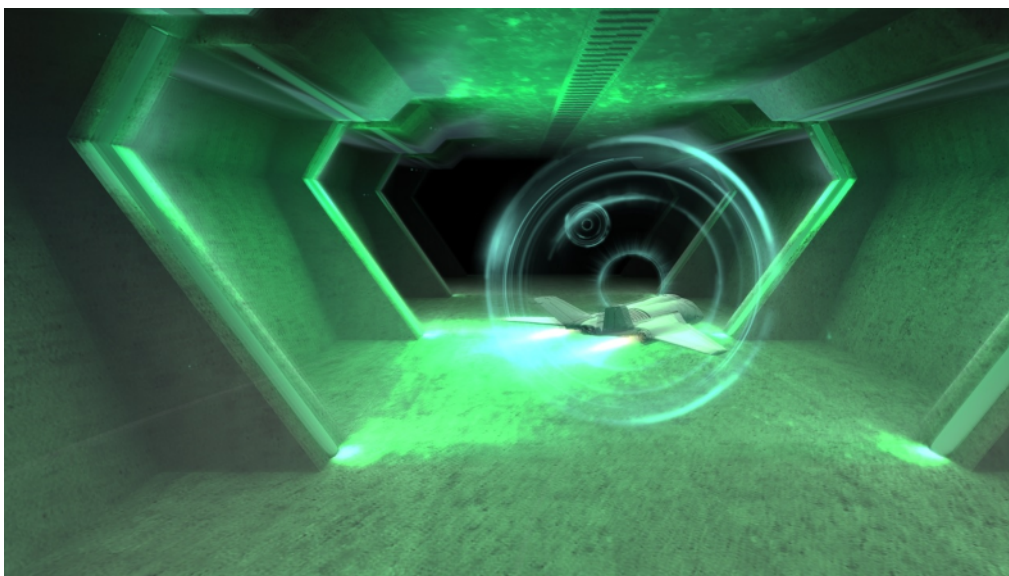
Make the airplane fly through the circles. The closer to the center it flies the more points you get.

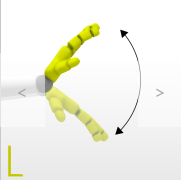
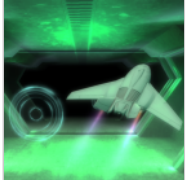


FUNCTIONAL MOVEMENTS

AIRPLANE

SAMPLE SETTINGS





◀

Difficulty

▶

2/4

Speed

< 100% >


speed set automatically

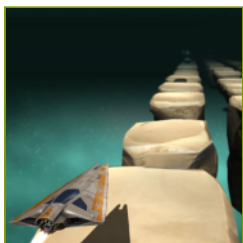
Duration

< 90s >

Range

0% 100%



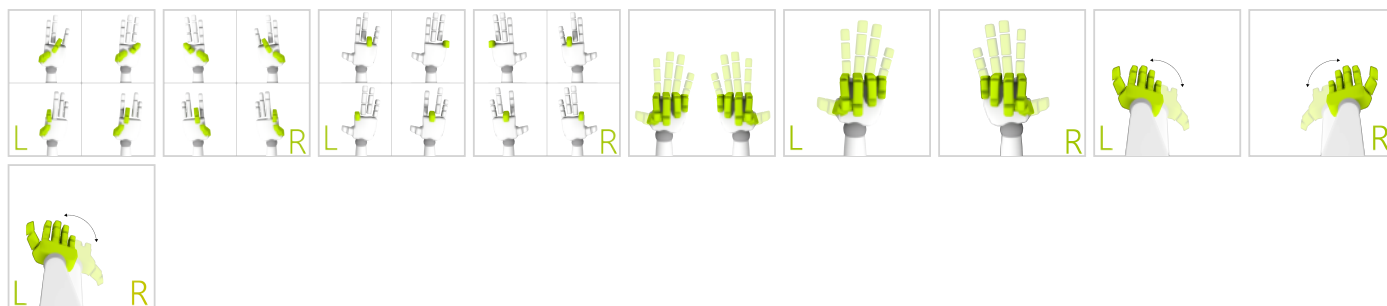


FUNCTIONAL MOVEMENTS

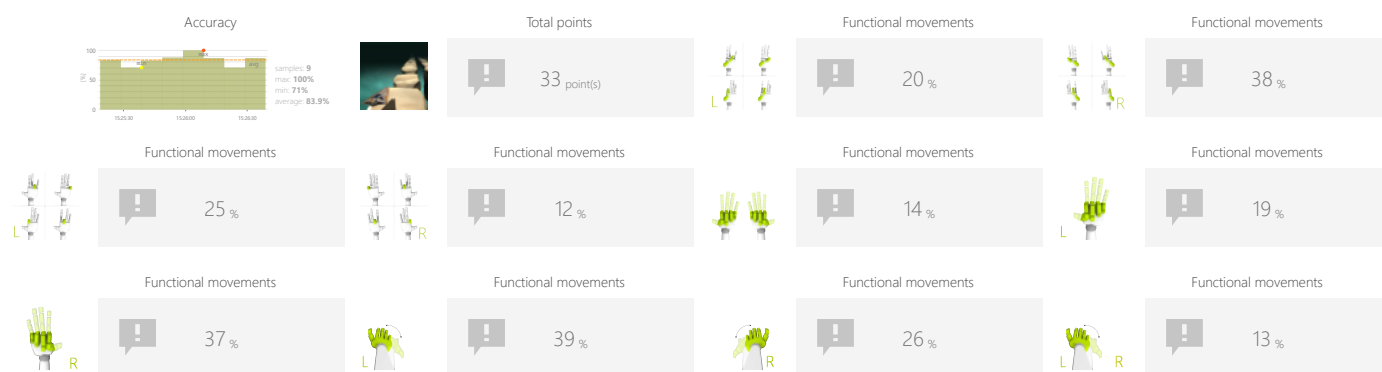
STONES

Measure and train individual's skills to perform movements based on real-world situational biomechanics. They usually involve multi-planar, multi-joint movements which place demand on the body's core musculature and innervation.

CONTROL MODES



RESULTS



ADJUSTMENTS

- Speed
- Task duration

OBJECTIVES

- Perceptivity
- Dynamics of planned movements
- Reaction to the positive visual stimuli
- Response to negative visual stimuli

INSTRUCTION FOR PATIENT

Make the the spaceship collect the colorful creatures and avoid the rocks.

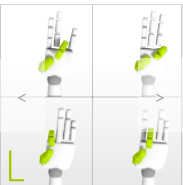
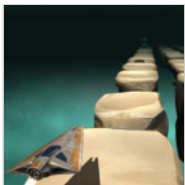



FUNCTIONAL MOVEMENTS

STONES

SAMPLE SETTINGS








Difficulty

1/3



Speed

< 100% >

speed set automatically

Duration

< 90s >



FUNCTIONAL MOVEMENTS

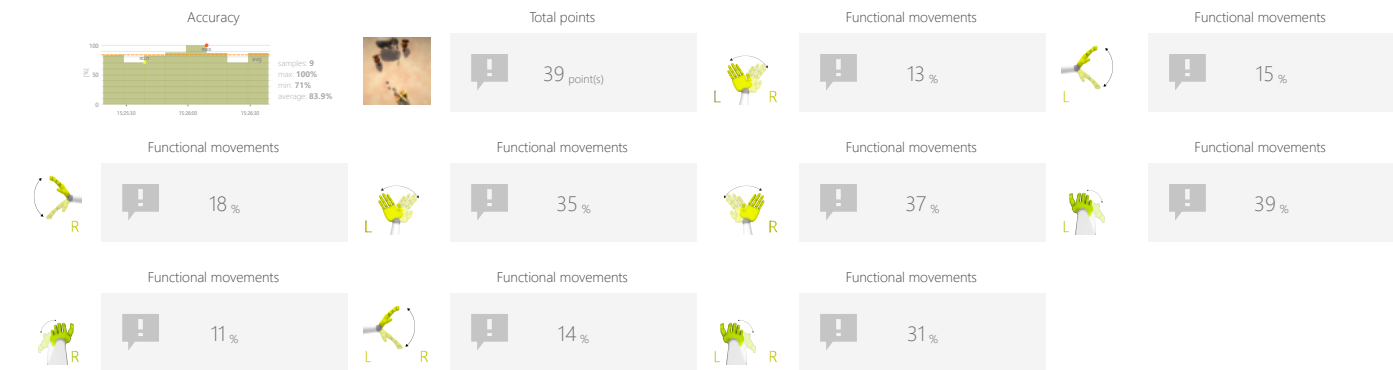
AUTOMATIC CANNON

Measure and train individual's skills to perform movements based on real-world situational biomechanics. They usually involve multi-planar, multi-joint movements which place demand on the body's core musculature and innervation.

CONTROL MODES



RESULTS



ADJUSTMENTS

- Task duration
- Range
- Enable distractors
- Time between cannonballs
- Time between enemies
- Enemies speed

OBJECTIVES

- Divided attention
- Spontaneous movements
- Predicting the trajectory of objects

INSTRUCTION FOR PATIENT

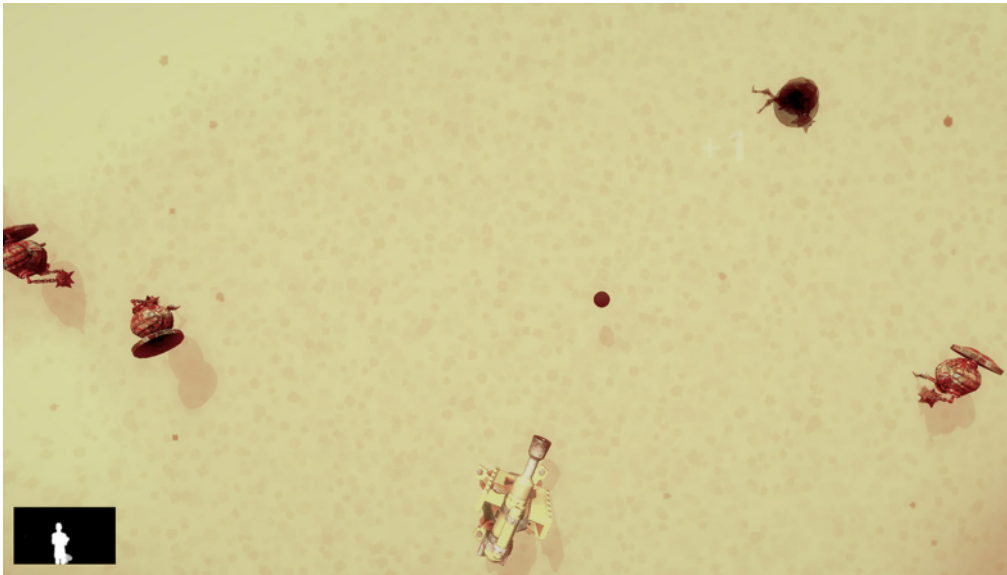
Control cannon(s) to destroy robots, but avoid hitting the elephant!



FUNCTIONAL MOVEMENTS

AUTOMATIC CANNON

SAMPLE SETTINGS



◀	Difficulty 1/3	▶
Duration 90s		Range 0% ↔ 100%
Enable distractors No		Time between cannonballs 1s
Time between enemies 3s		Enemies speed 50%



◀	Difficulty custom	▶
Duration 90s		Range 0% ↔ 100%
Enable distractors Yes		Time between cannonballs 1s
Time between enemies 3s		Enemies speed 50%

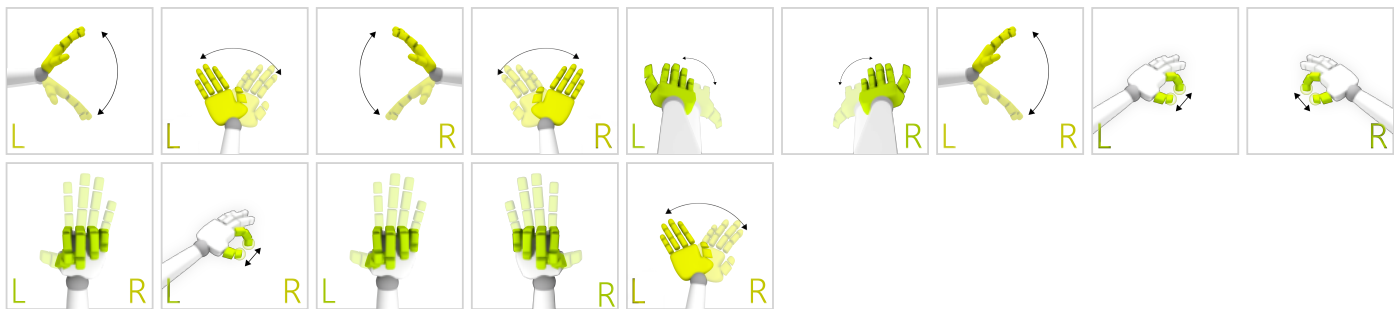


FUNCTIONAL MOVEMENTS

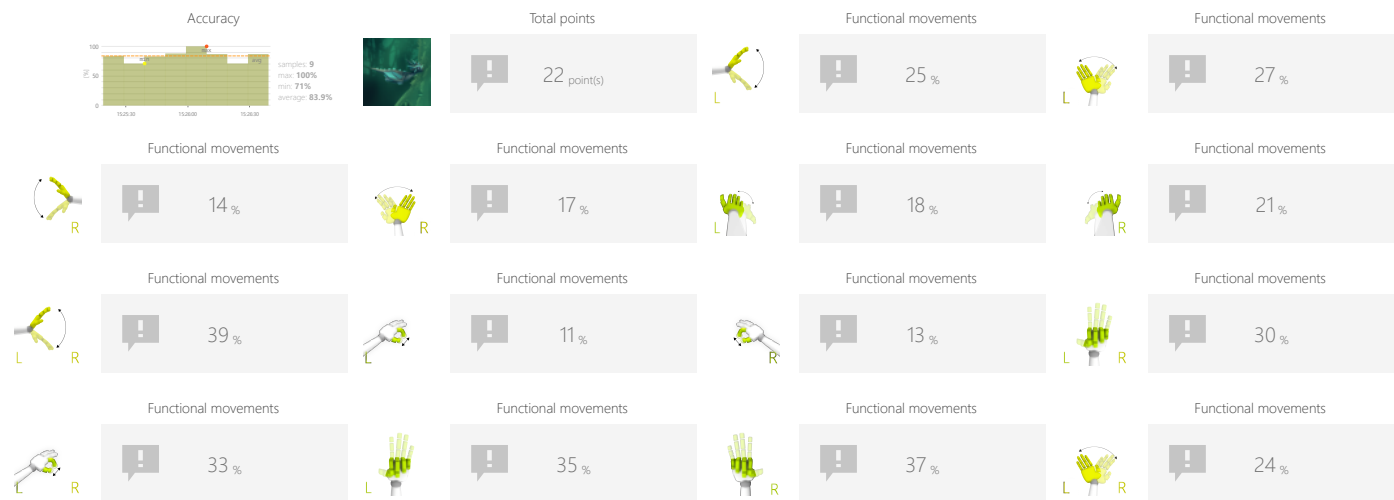
DRAGON

Measure and train individual's skills to perform movements based on real-world situational biomechanics. They usually involve multi-planar, multi-joint movements which place demand on the body's core musculature and innervation.

CONTROL MODES



RESULTS



ADJUSTMENTS

- Task duration
- Range
- Coins group size
- Distance between coins
- Gravity force

OBJECTIVES

- Predicting the trajectory of objects
- Improve range of motion
- Visual motor coordination
- Muscle strengthening
- Planning and Strategy

INSTRUCTION FOR PATIENT

Fly and collect the coins.

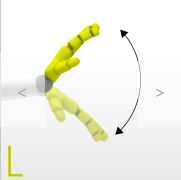



FUNCTIONAL MOVEMENTS

DRAGON

SAMPLE SETTINGS





◀

Difficulty

▶

custom

◀

Duration

▶

90s

◀

Range

▶

0% 100%

0% 100%

◀

Coins group size

▶

3

◀

Distance between coins

▶

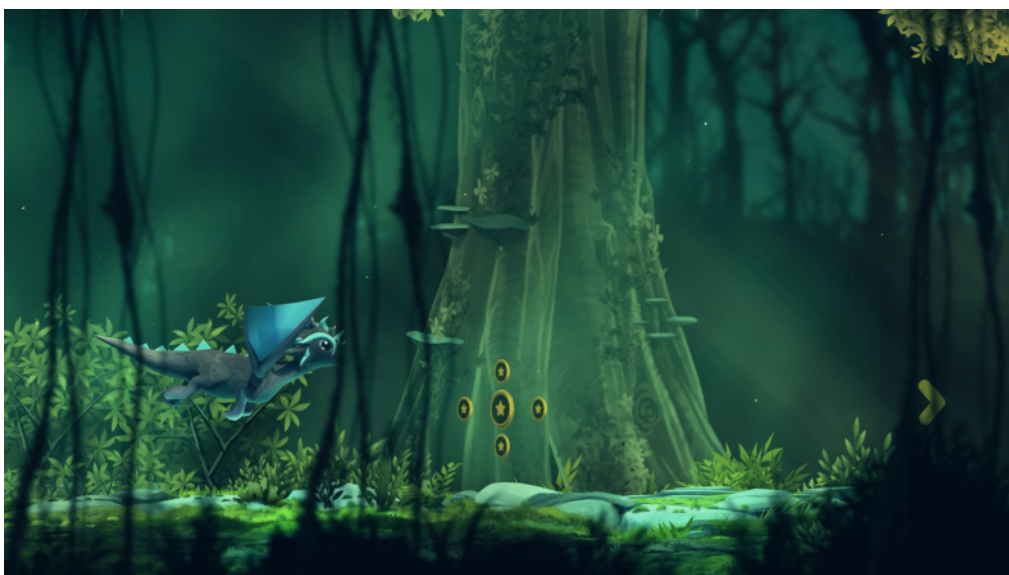
250%

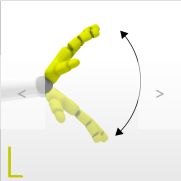

◀

Gravity force

▶

100%





◀

Difficulty

▶

1/3

◀

Duration

▶

90s

◀

Range

▶

0% 100%

0% 100%

◀

Coins group size

▶

5

◀

Distance between coins

▶

250%

◀

Gravity force

▶

100%



FUNCTIONAL MOVEMENTS

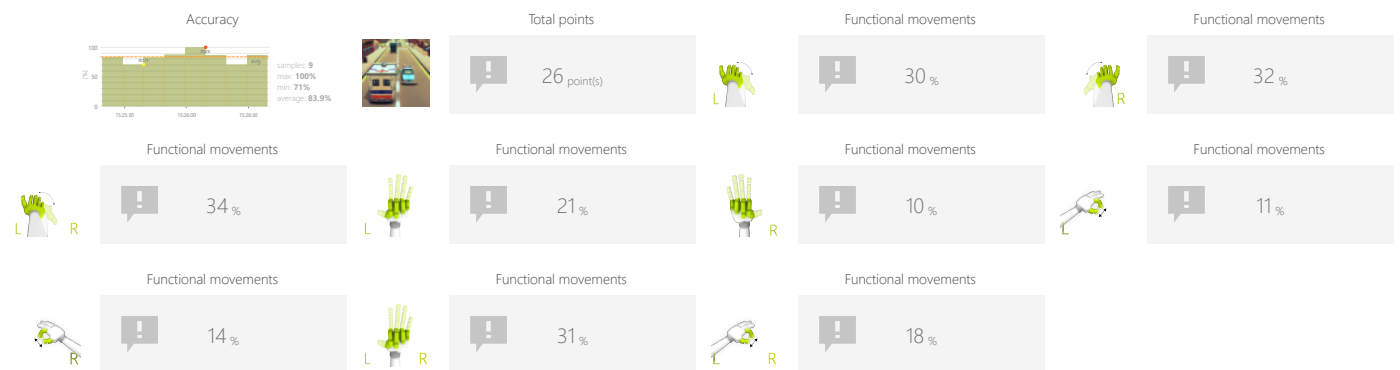
AMBULANCE

Measure and train individual's skills to perform movements based on real-world situational biomechanics. They usually involve multi-planar, multi-joint movements which place demand on the body's core musculature and innervation.

CONTROL MODES



RESULTS



ADJUSTMENTS

- Speed
- Task duration
- Range
- Distance between cars

OBJECTIVES

- Dynamics of planned movements
- Focusing
- Speed of decision making
- Visual motor coordination

INSTRUCTION FOR PATIENT

Go as fast as you can and avoid hitting other cars.





FUNCTIONAL MOVEMENTS

AMBULANCE

SAMPLE SETTINGS





Difficulty
2/3



Speed
50%
speed set automatically

Duration
90s

Range
80% ← 20%

Distance between cars
50%





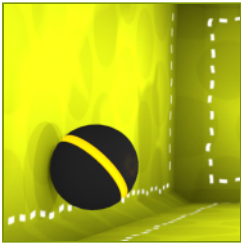
Difficulty
custom

Speed
50%
speed set automatically

Duration
90s

Range
80% ← 20%

Distance between cars
200%

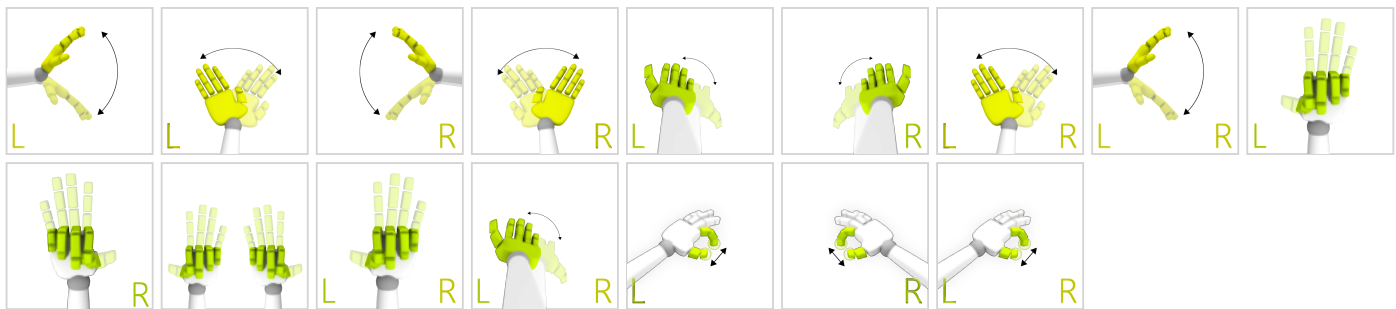


FUNCTIONAL MOVEMENTS

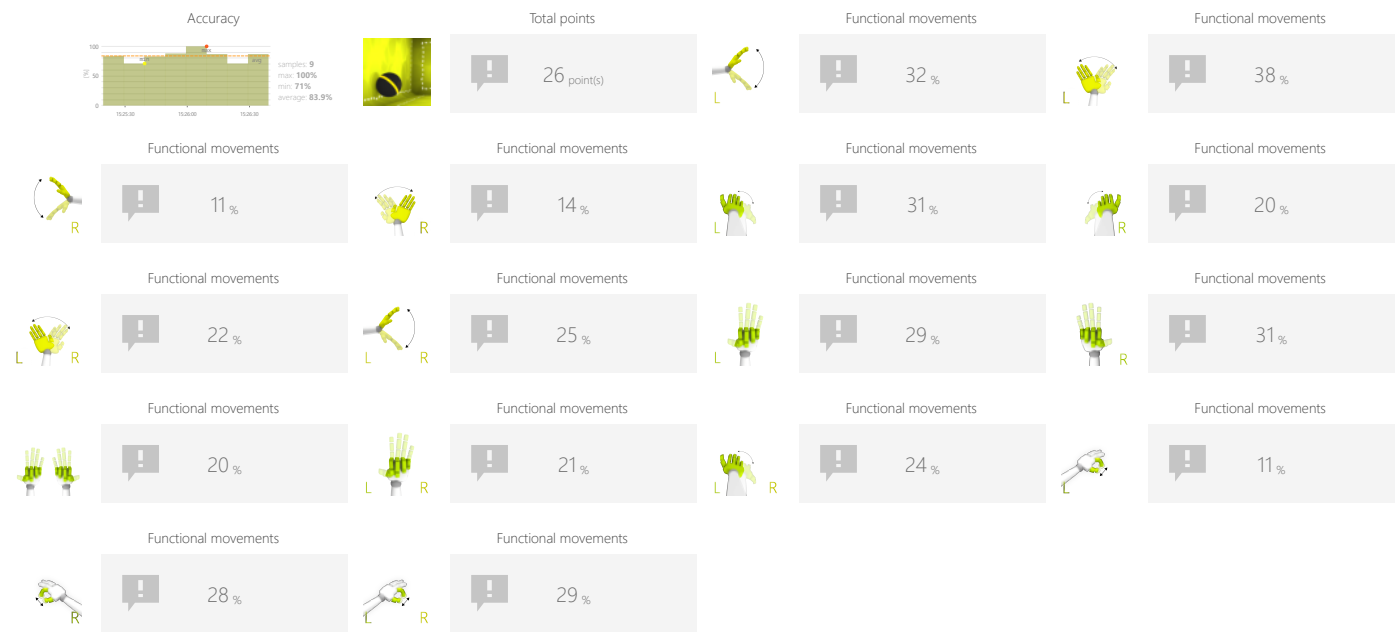
ARCANOID

Measure and train individual's skills to perform movements based on real-world situational biomechanics. They usually involve multi-planar, multi-joint movements which place demand on the body's core musculature and innervation.

CONTROL MODES



RESULTS



ADJUSTMENTS

- Task duration
- Range
- Reticle size
- Speed of objects

OBJECTIVES

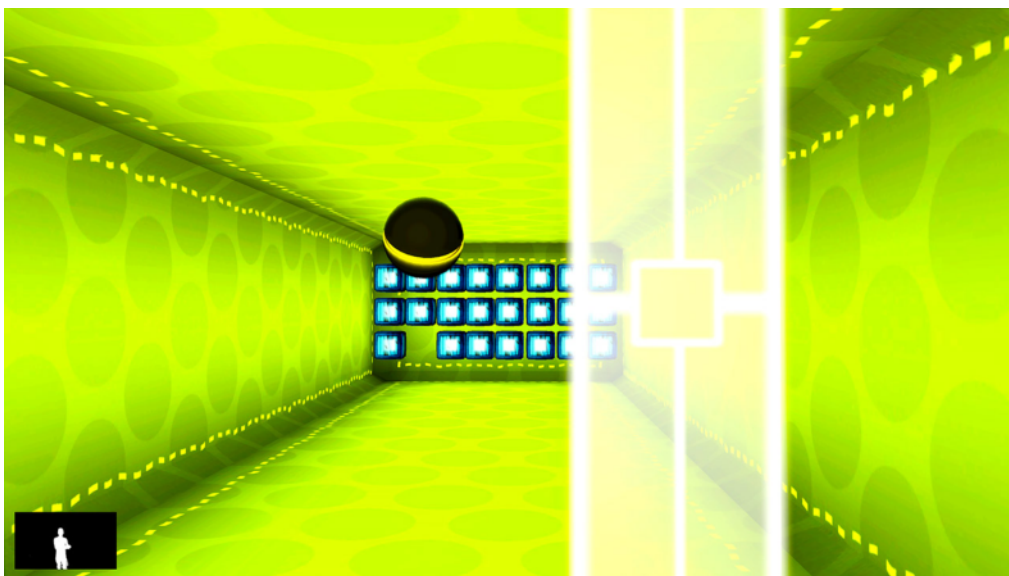
- Dynamics of planned movements
- Predicting the trajectory of objects in 3D space
- Visual motor coordination

INSTRUCTION FOR PATIENT

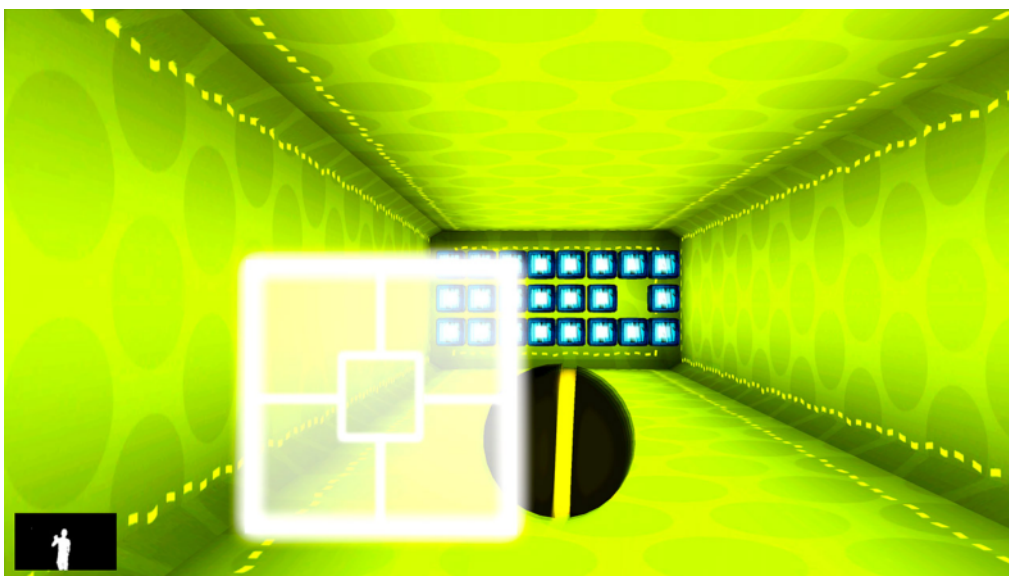
Destroy as many boxes as you can.



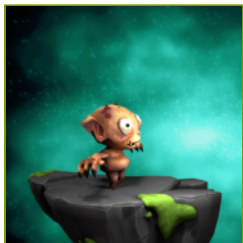
SAMPLE SETTINGS



	Difficulty custom
Duration < 90s >	Range 0% 100%
Reticle size < 100% >	Speed of objects < 70% >



	Difficulty custom
Duration < 90s >	Range 0% 100%
Reticle size < 75% >	Speed of objects < 70% >

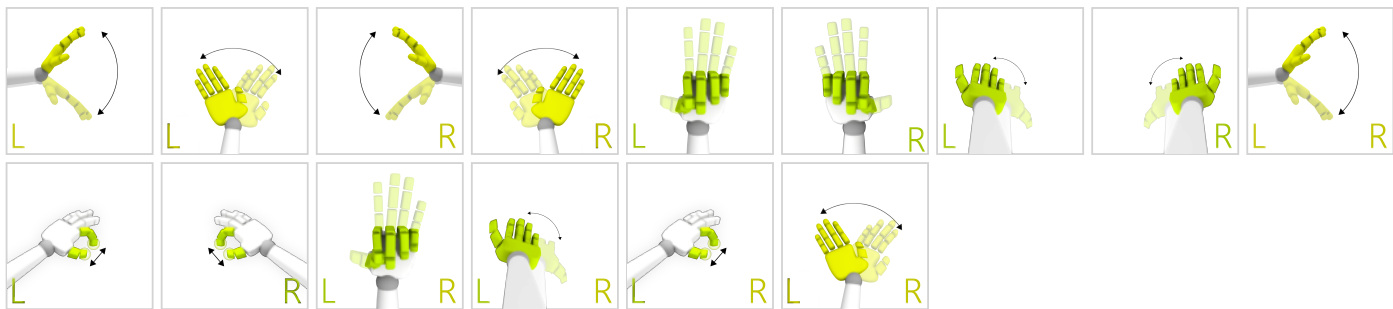


FUNCTIONAL MOVEMENTS

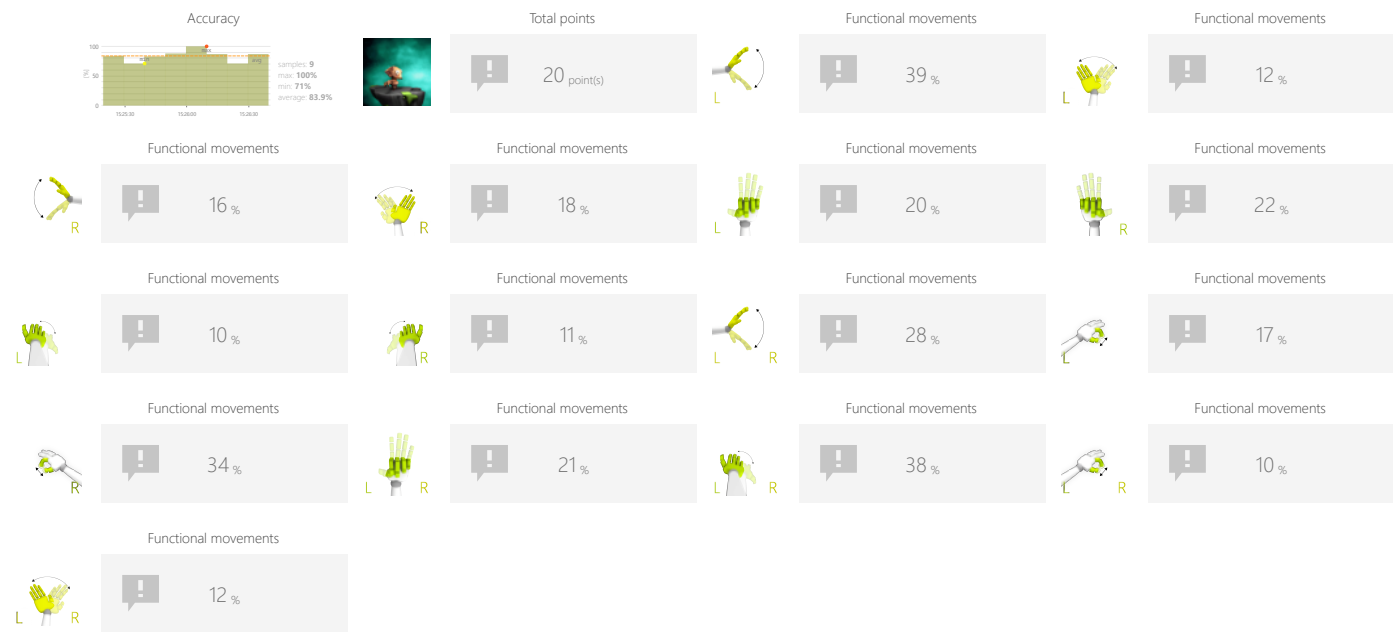
ROCKET JUMPING

Measure and train individual's skills to perform movements based on real-world situational biomechanics. They usually involve multi-planar, multi-joint movements which place demand on the body's core musculature and innervation.

CONTROL MODES



RESULTS



ADJUSTMENTS

- Task duration
- Range
- Time between objects
- Bomb format
- Speed of objects

OBJECTIVES

- Spontaneous movements
- Dynamic responses to emerging moving targets
- Predicting the trajectory of objects

INSTRUCTION FOR PATIENT

Help the creature jump over incoming rockets and avoid being hit.



FUNCTIONAL MOVEMENTS

ROCKET JUMPING

SAMPLE SETTINGS



	Difficulty 1/3	
Duration < 90s >		Range 0% 100%
Time between objects < 5s >		Bomb format < > 1
Speed of objects < 100% >		

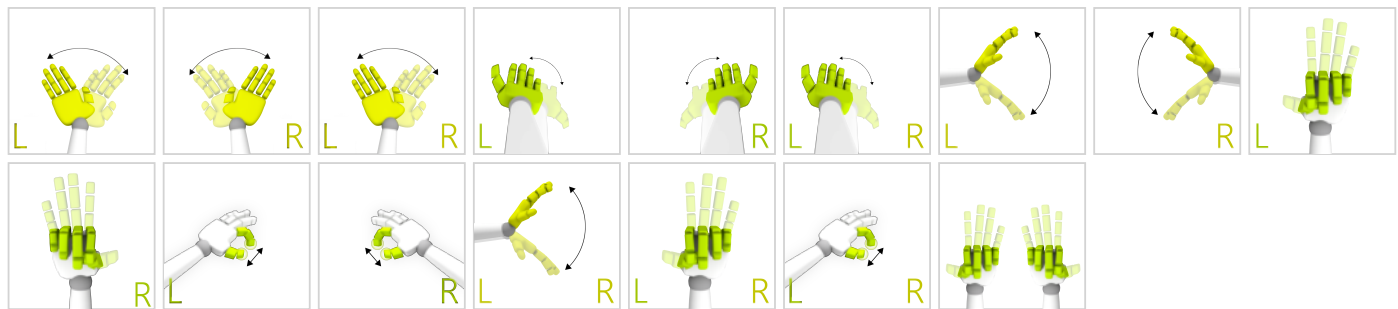


FUNCTIONAL MOVEMENTS

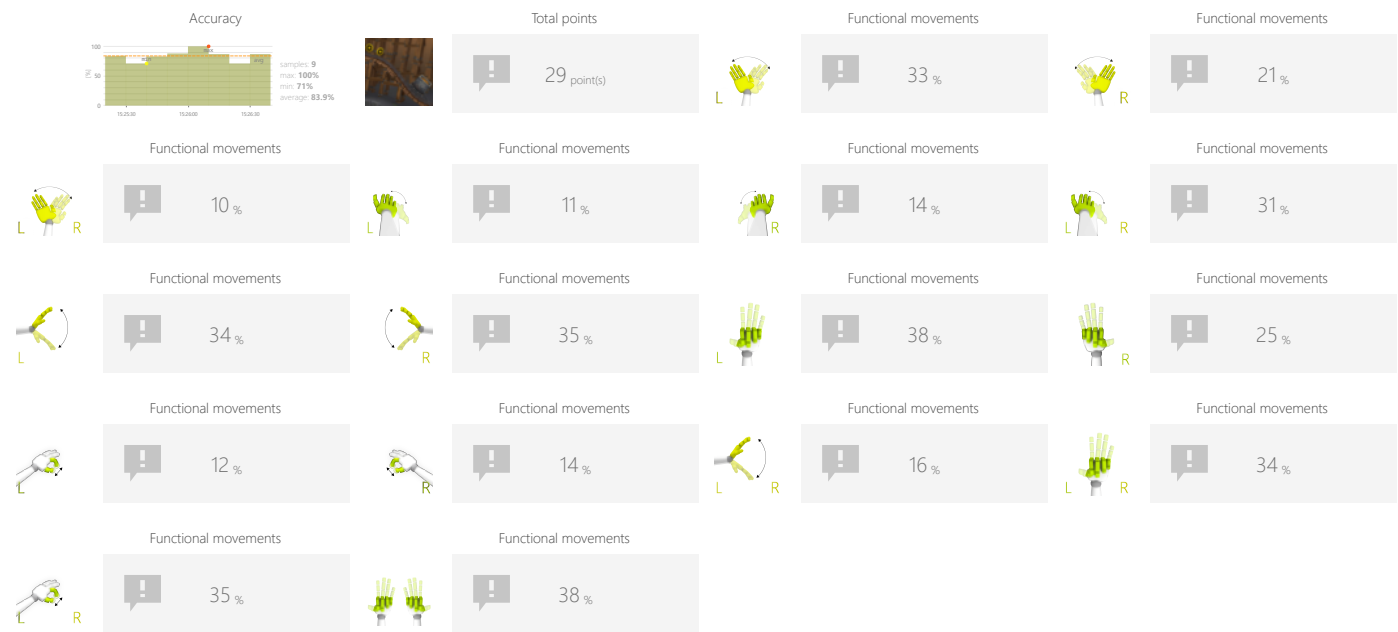
RAILS

Measure and train individual's skills to perform movements based on real-world situational biomechanics. They usually involve multi-planar, multi-joint movements which place demand on the body's core musculature and innervation.

CONTROL MODES



RESULTS



ADJUSTMENTS

- Speed
- Task duration
- Range
- Route shape
- Enable derailling
- Enable obstacles
- Time between objects

OBJECTIVES

- Dynamic responses to emerging moving targets
- Predicting the trajectory of objects
- Visual motor coordination

INSTRUCTION FOR PATIENT

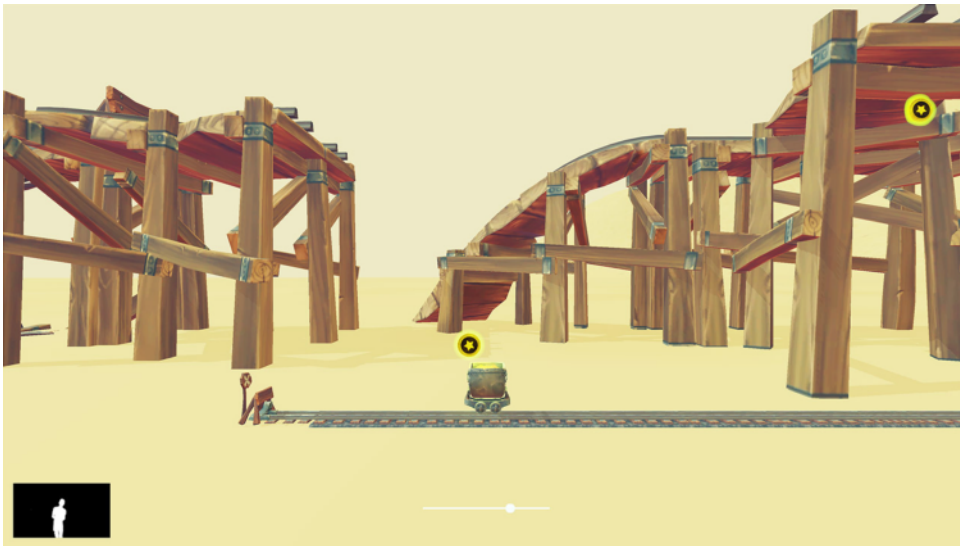
Control the trolley to collect the coins.





FUNCTIONAL MOVEMENTS

RAILS

SAMPLE SETTINGS





◀

Difficulty

▶

1/3

Speed

<

100%

>

speed set automatically

Duration


<

90s

>

Range

<



>

0% ↔ 100%

Route shape

<

>

Enable derailling

<

No

>

Enable obstacles

<

No

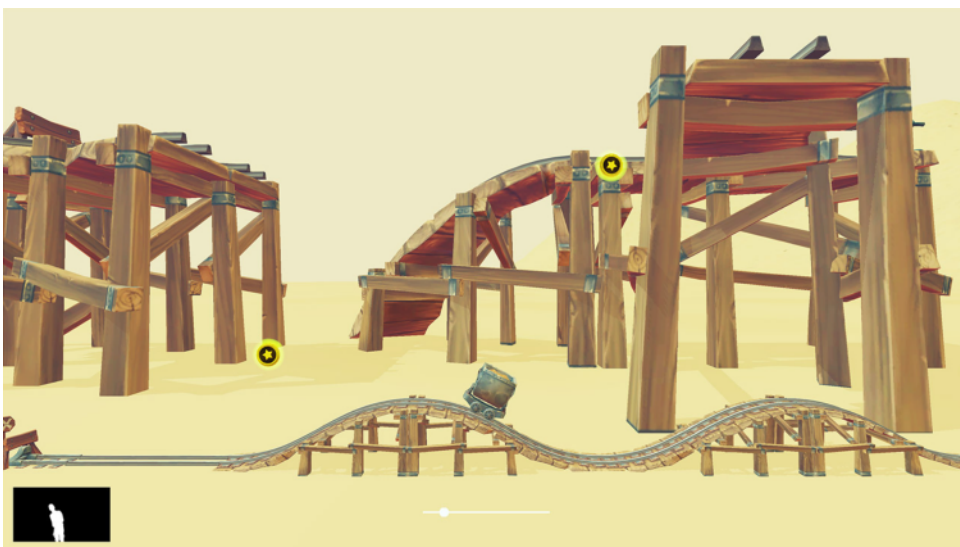
>

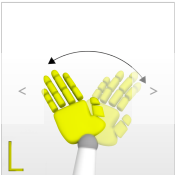
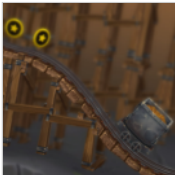
Time between objects

<

5s

>





◀

Difficulty

▶

custom

Speed

<

100%

>

speed set automatically

Duration


<

90s

>

Range

<




>

0% ↔ 100%

Route shape

<



>

Enable derailling

<

No

>

Enable obstacles

<

No

>

Time between objects

<

5s

>

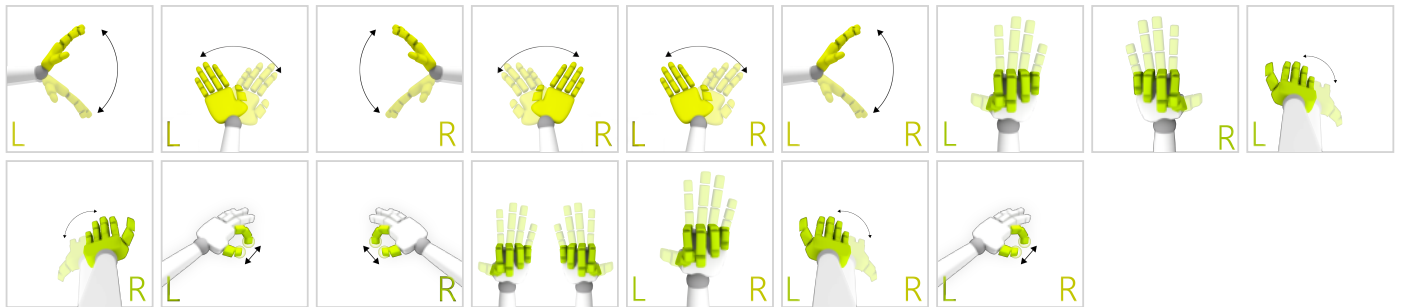


FUNCTIONAL MOVEMENTS

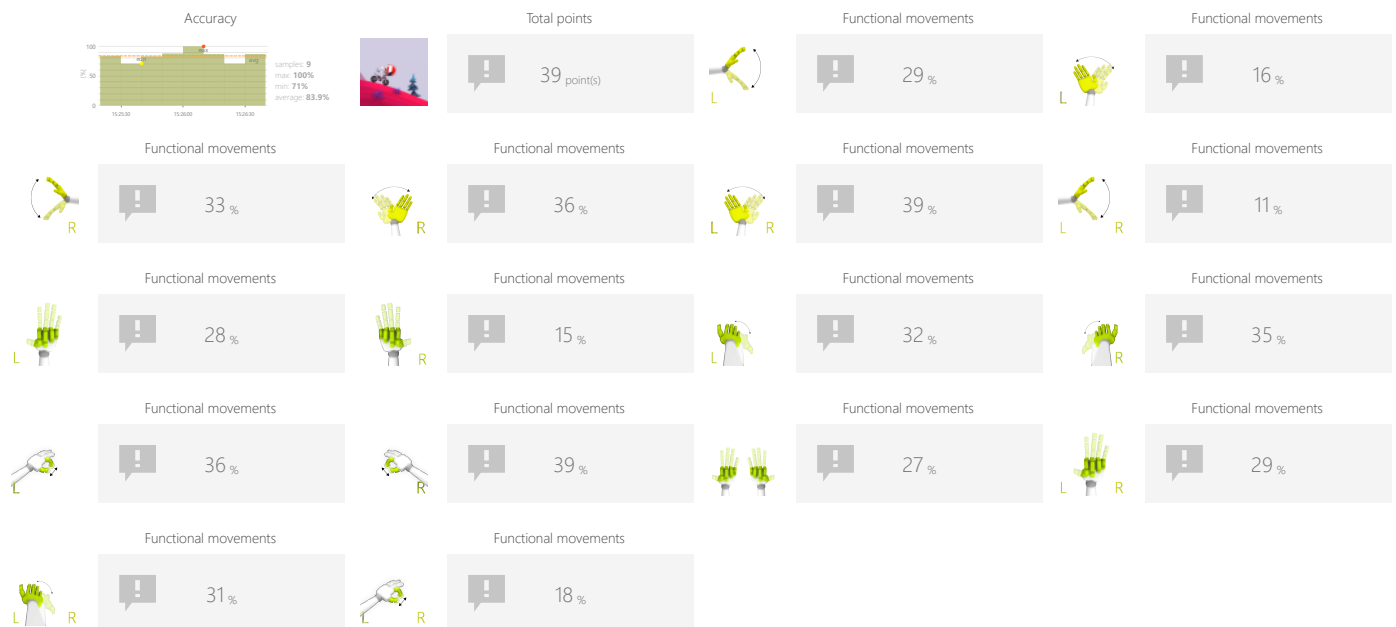
MOTOCROSS

Measure and train individual's skills to perform movements based on real-world situational biomechanics. They usually involve multi-planar, multi-joint movements which place demand on the body's core musculature and innervation.

CONTROL MODES



RESULTS



ADJUSTMENTS

- Task duration
- Range
- Route shape

OBJECTIVES

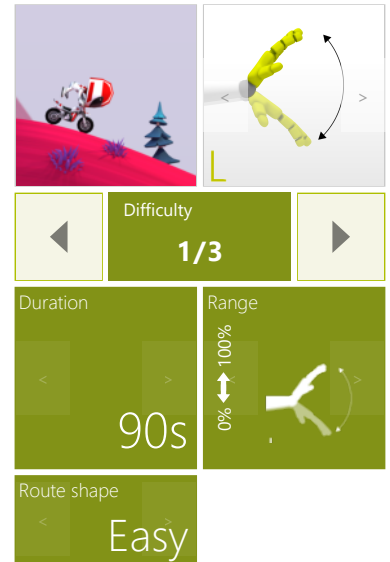
- Dynamics of planned movements
- Planning and Strategy

INSTRUCTION FOR PATIENT

Accelerate and brake to cover the entire route as quickly as possible without tipping.



SAMPLE SETTINGS





FUNCTIONAL MOVEMENTS

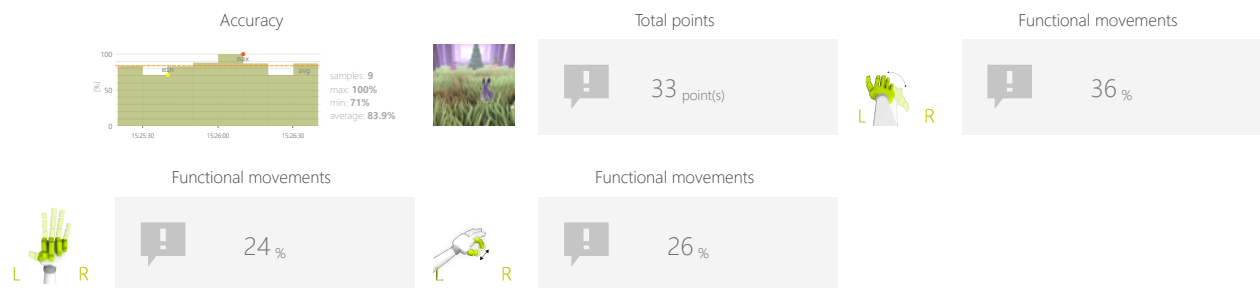
FOREST RUNNER

Measure and train individual's skills to perform movements based on real-world situational biomechanics. They usually involve multi-planar, multi-joint movements which place demand on the body's core musculature and innervation.

CONTROL MODES



RESULTS



ADJUSTMENTS

- Speed
- Task duration
- Range

OBJECTIVES

- Dynamics of planned movements
- Focusing
- Planned movements
- Speed of movement

INSTRUCTION FOR PATIENT

Keep the hare on the run, avoid obstacles and collect as many carrots as you can.





FUNCTIONAL MOVEMENTS

FOREST RUNNER

SAMPLE SETTINGS





◀

Difficulty
1/2

▶

<

Speed
150%

>

speed set automatically

<

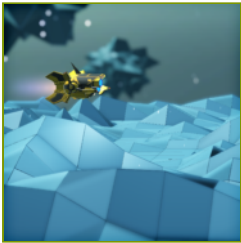
Duration
90s

>

<

Range
80% ↔ 20%

>



FUNCTIONAL MOVEMENTS

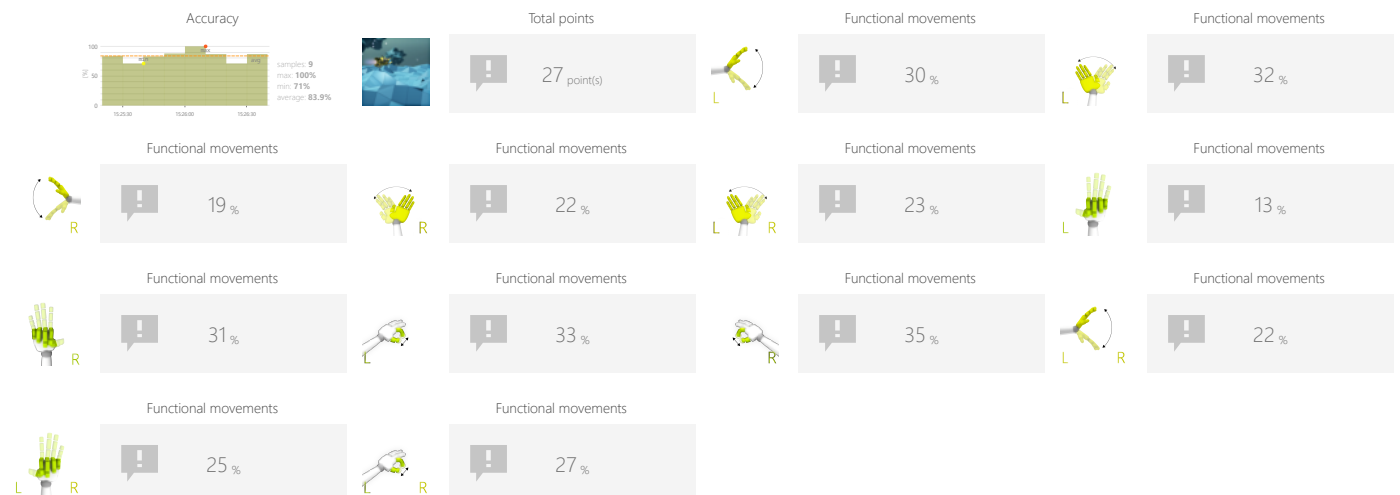
GEOMETRY FLIER

Measure and train individual's skills to perform movements based on real-world situational biomechanics. They usually involve multi-planar, multi-joint movements which place demand on the body's core musculature and innervation.

CONTROL MODES



RESULTS



ADJUSTMENTS

- Speed
- Task duration
- Range

OBJECTIVES

- Dynamics of planned movements
- Activity in a given rhythm
- Visual motor coordination

INSTRUCTION FOR PATIENT

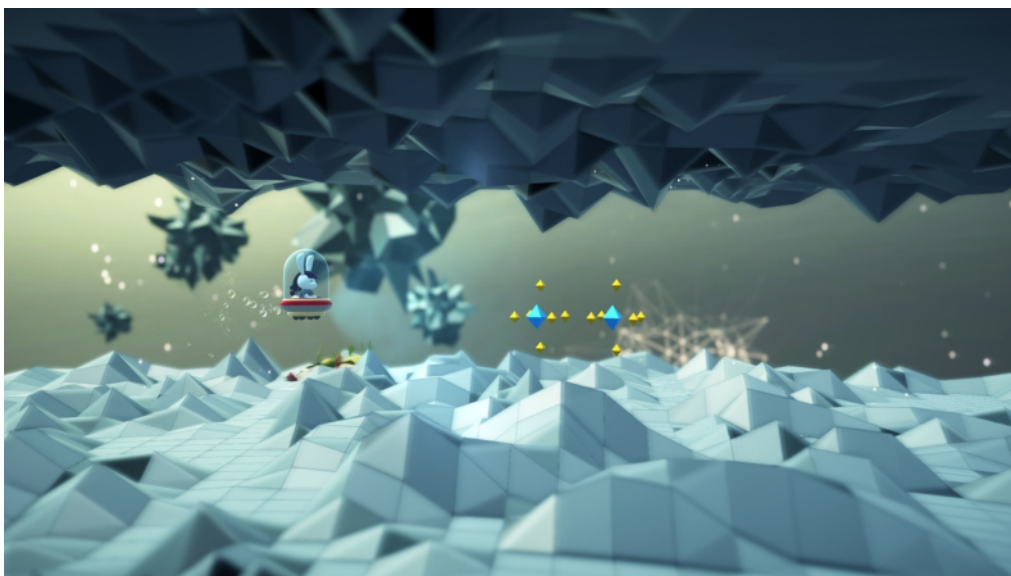
Control the vehicle to avoid the obstacles.

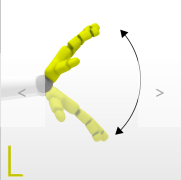



FUNCTIONAL MOVEMENTS

GEOMETRY FLIER

SAMPLE SETTINGS





◀

Difficulty

▶

1/3

Speed

< 100% >


speed set automatically

Duration

< 90s >

Range

0% 100%



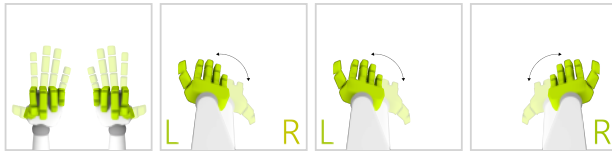


FUNCTIONAL MOVEMENTS

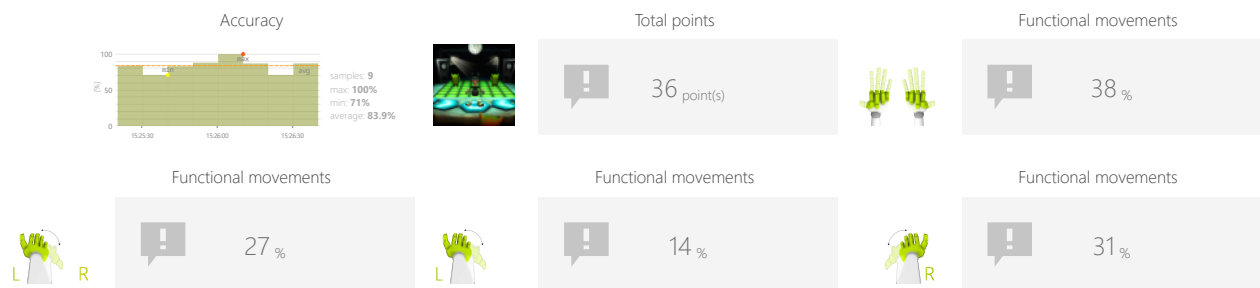
DANCEMAN

Measure and train individual's skills to perform movements based on real-world situational biomechanics. They usually involve multi-planar, multi-joint movements which place demand on the body's core musculature and innervation.

CONTROL MODES



RESULTS



ADJUSTMENTS

- Task duration
- Range
- Advanced scoring
- Song index
- Spawn rate level

OBJECTIVES

- Activity in a given rhythm
- Spontaneous movements
- Visual motor coordination

INSTRUCTION FOR PATIENT

Hit the green characters when they come close.



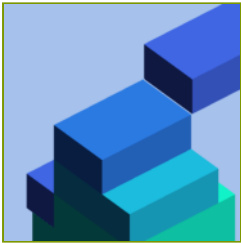
FUNCTIONAL MOVEMENTS

DANCEMAN

SAMPLE SETTINGS



	Difficulty 1/6	
Duration 90s		Range 20% 80%
Advanced scoring No		Song index 0
Spawn rate level Easy		

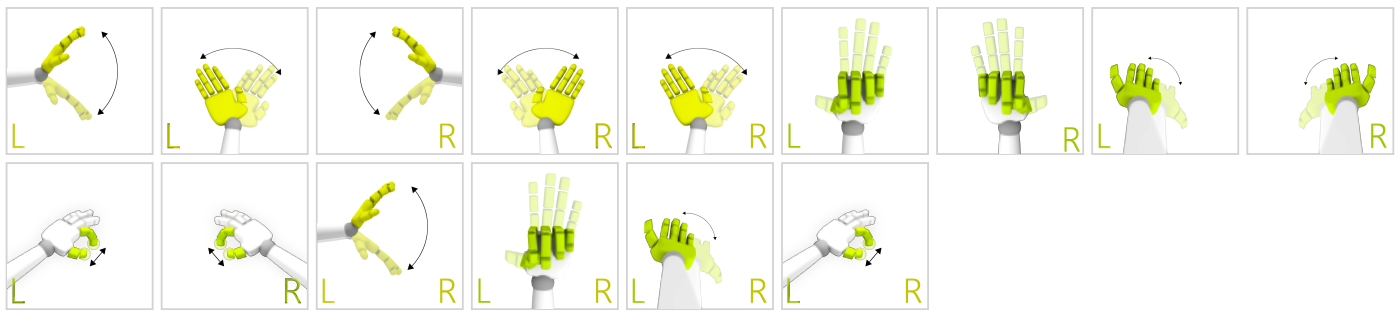


FUNCTIONAL MOVEMENTS

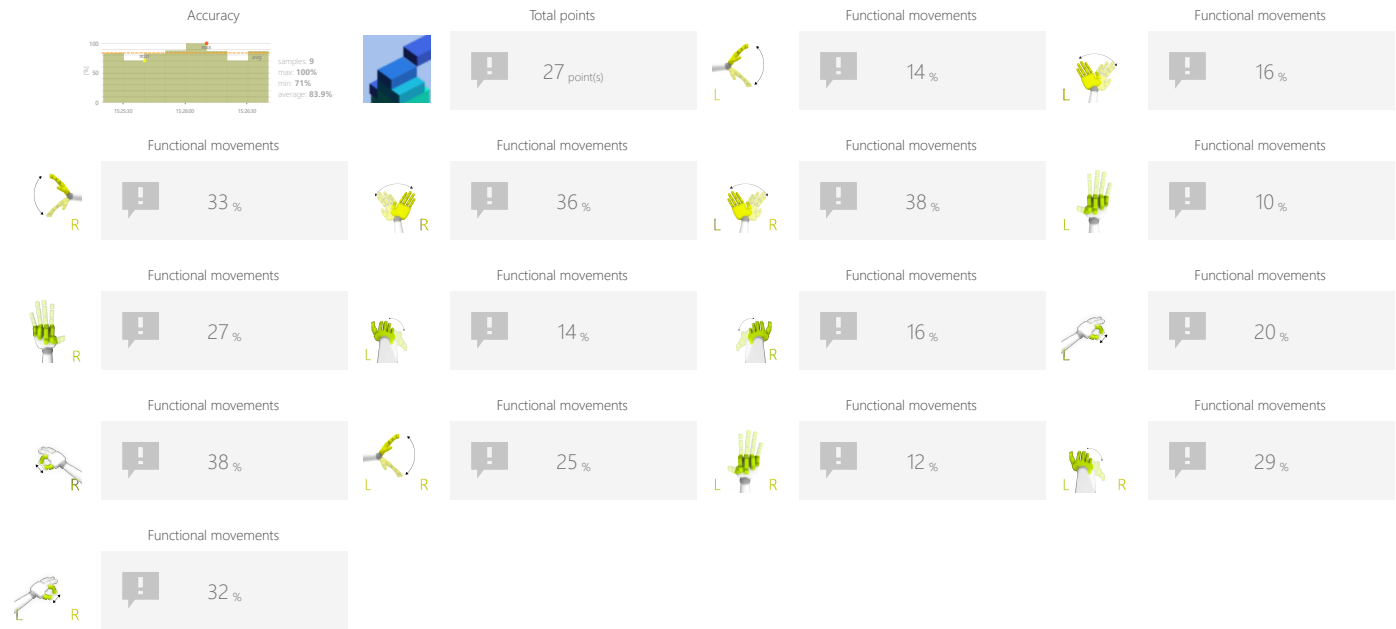
STACK BUILDER

Measure and train individual's skills to perform movements based on real-world situational biomechanics. They usually involve multi-planar, multi-joint movements which place demand on the body's core musculature and innervation.

CONTROL MODES



RESULTS



ADJUSTMENTS

- Task duration
- Range
- Speed of objects

OBJECTIVES

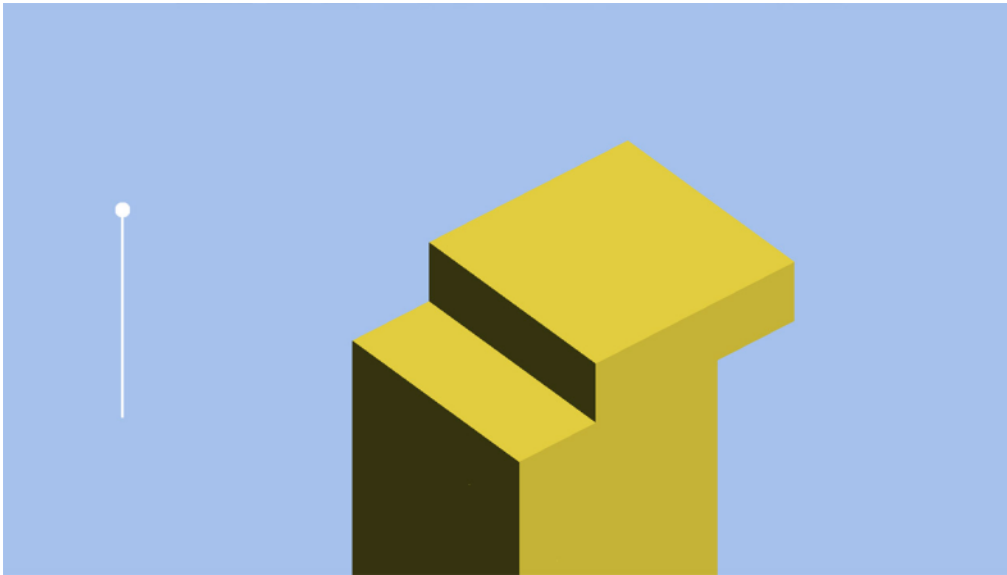
- Repetitive movements
- Rhythmicity
- Planned movements
- Focusing

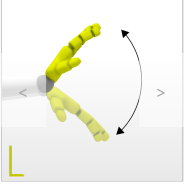

INSTRUCTION FOR PATIENT

Build the highest stack possible by perfectly aligning blocks. Time your actions to perform the specified movement pattern when blocks are accurately positioned.



SAMPLE SETTINGS





◀

Difficulty

1/3

▶

◀

Duration

90s

>

◀

Range

0% 100%

>

◀

Speed of objects

50%

>

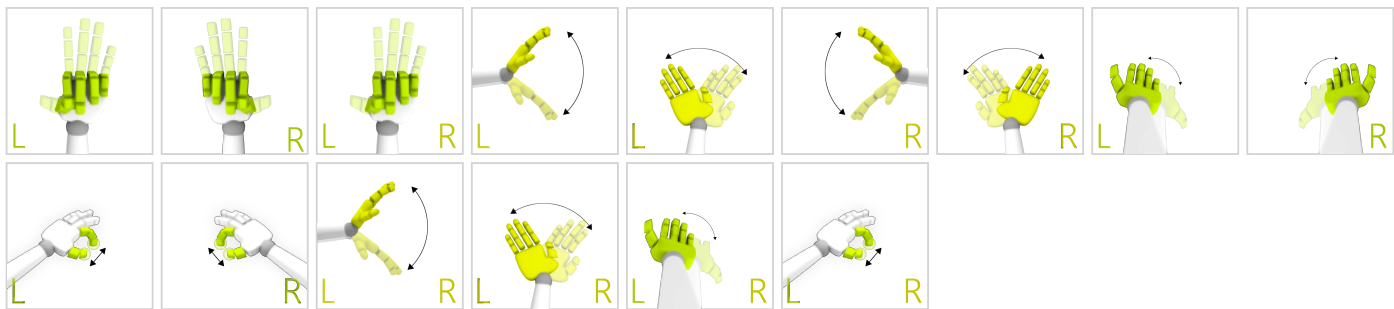


FUNCTIONAL MOVEMENTS

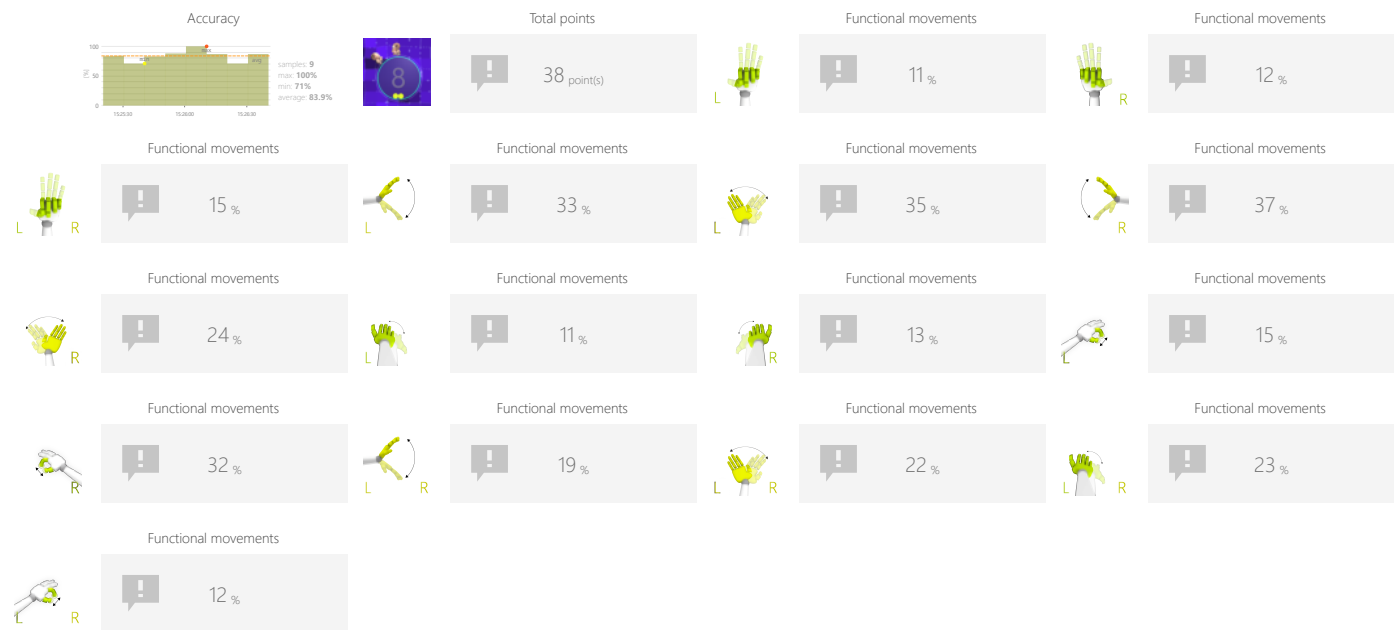
IMP DODGE

Measure and train individual's skills to perform movements based on real-world situational biomechanics. They usually involve multi-planar, multi-joint movements which place demand on the body's core musculature and innervation.

CONTROL MODES



RESULTS



ADJUSTMENTS

- Task duration
- Range
- Number ofimps
- Number of targets
- Speed of objects

OBJECTIVES

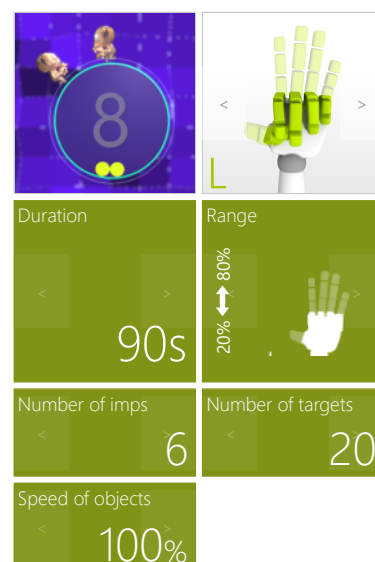
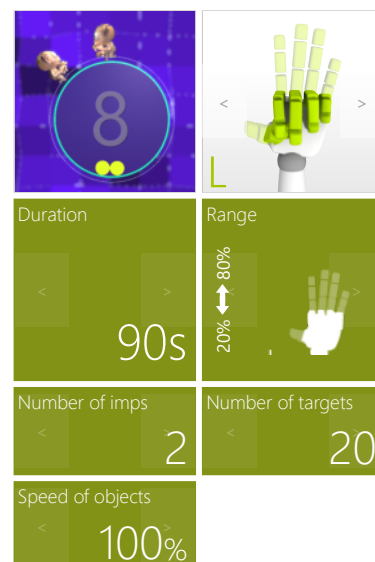
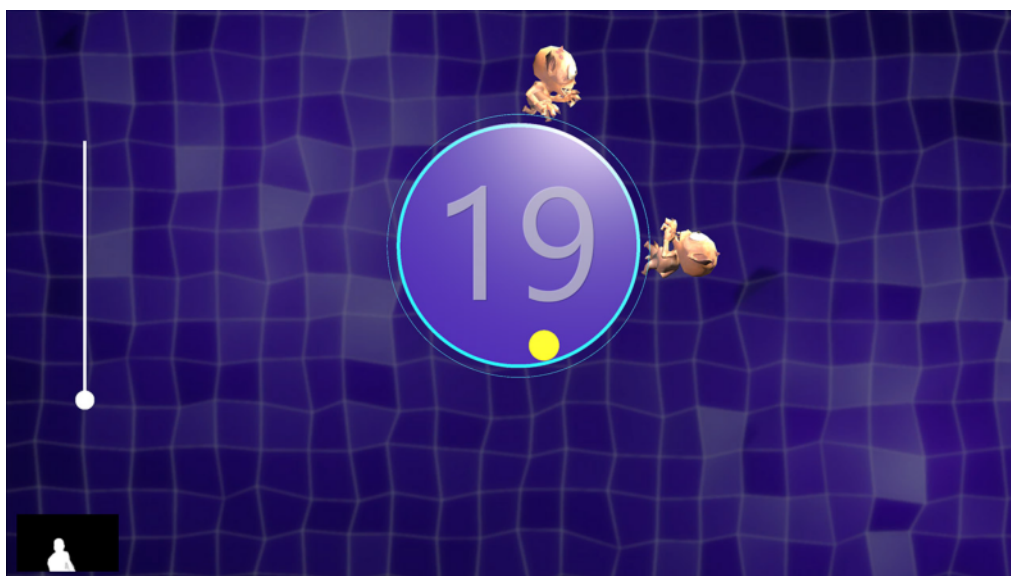
- Dynamics of planned movements
- Predicting the trajectory of objects
- Visual motor coordination
- Focusing

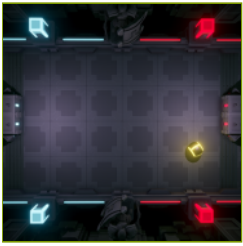
INSTRUCTION FOR PATIENT

Shoot green balls into the circle while avoiding hittingimps.



SAMPLE SETTINGS



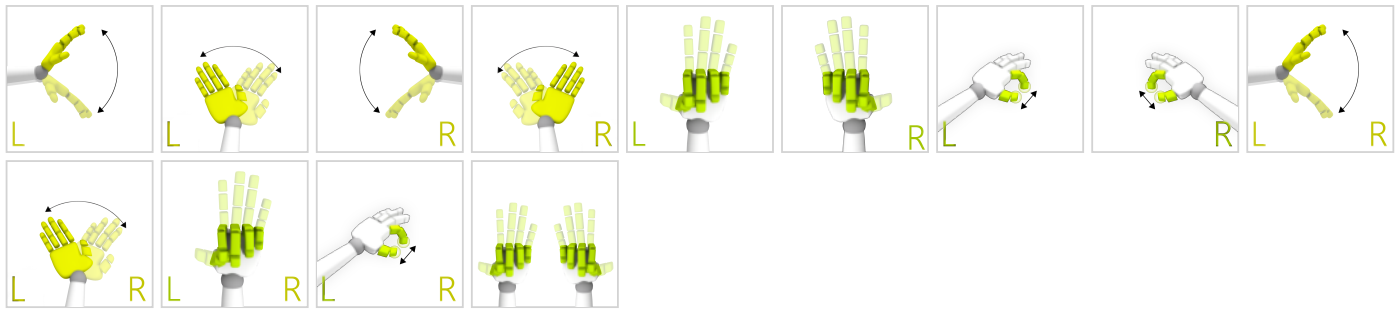


FUNCTIONAL MOVEMENTS

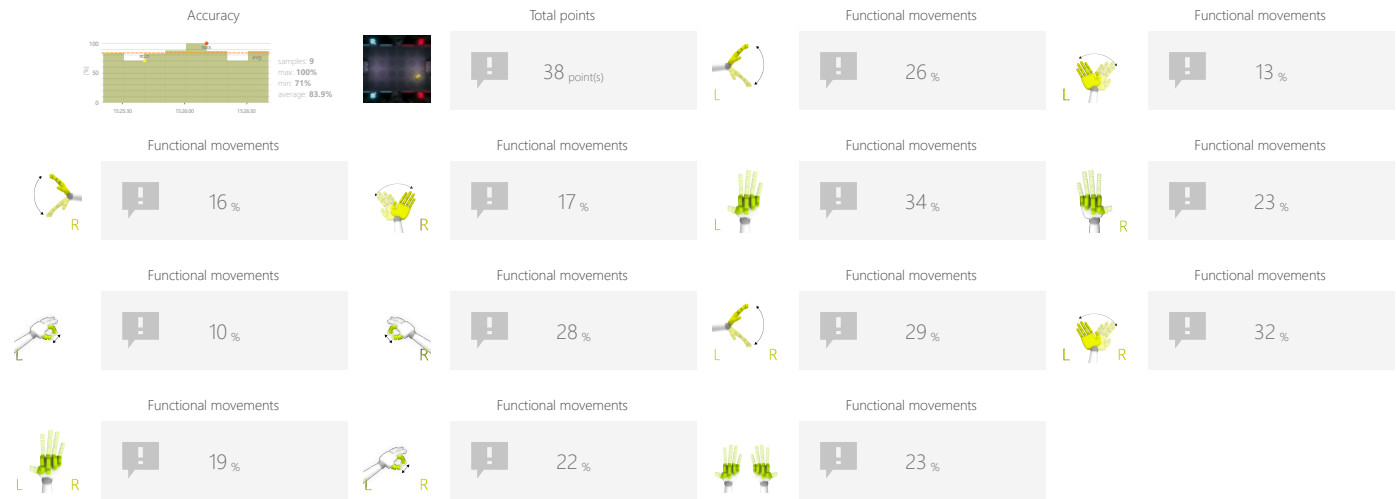
PONG

Measure and train individual's skills to perform movements based on real-world situational biomechanics. They usually involve multi-planar, multi-joint movements which place demand on the body's core musculature and innervation.

CONTROL MODES



RESULTS



ADJUSTMENTS

- Task duration
- Range
- Speed of objects

OBJECTIVES

- Planned movements
- Focusing
- Predicting the trajectory of objects

INSTRUCTION FOR PATIENT

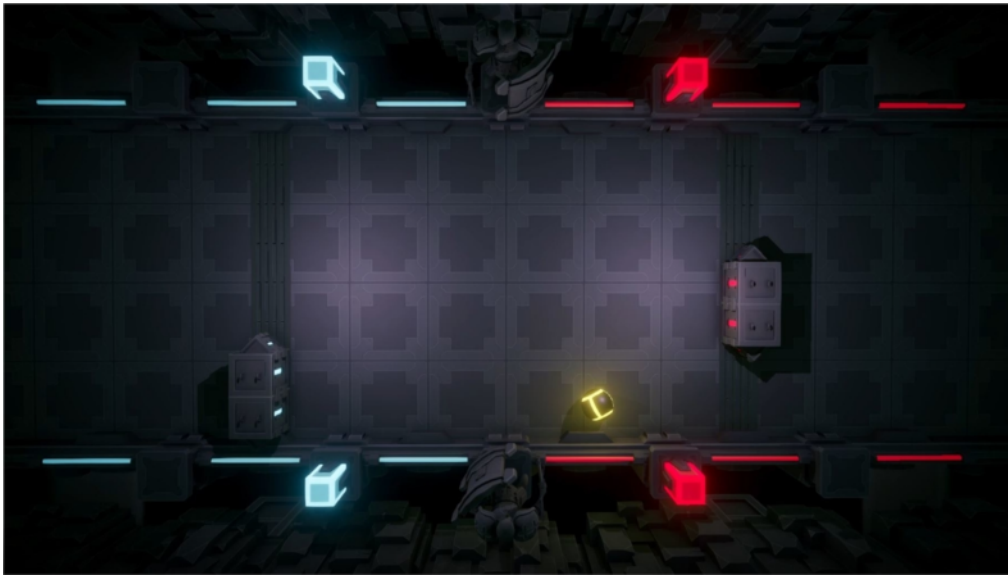
Use the paddles to hit a ball back and forth.

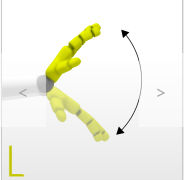




FUNCTIONAL MOVEMENTS

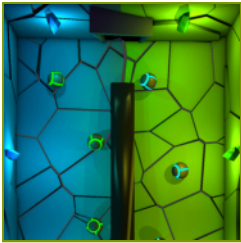
PONG

SAMPLE SETTINGS





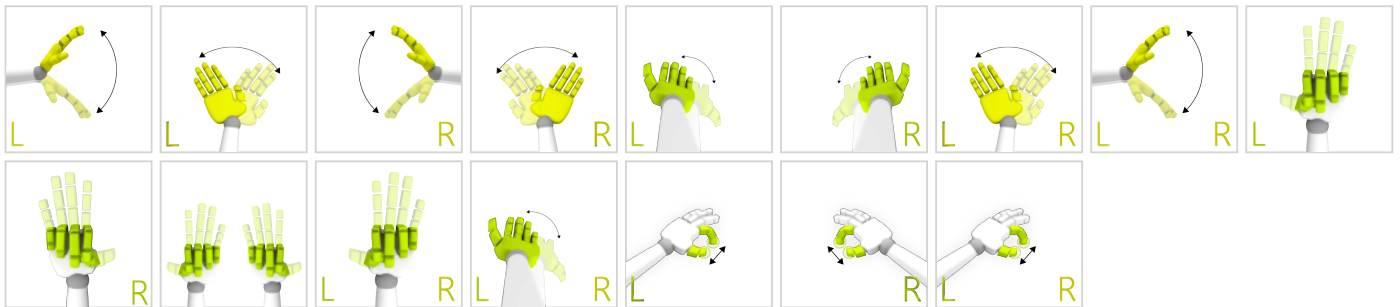
◀	Difficulty 1/3	▶
Duration 90s		Range 0% 100% 
Speed of objects 100%		



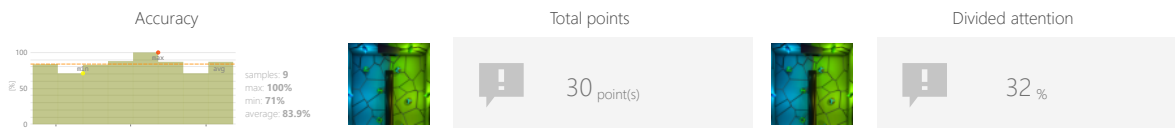
DIVIDED ATTENTION SORTER

Measure and train individual's skills to successfully execute more than one action at a time, while paying attention to two or more channels of information.

CONTROL MODES



RESULTS



ADJUSTMENTS

- Task duration
- Range
- Number of objects
- Gap size
- Speed of objects

OBJECTIVES

- Predicting the trajectory of objects
- Focusing
- Perceptivity
- Movement precision
- Exercise with or without support from healthy limb

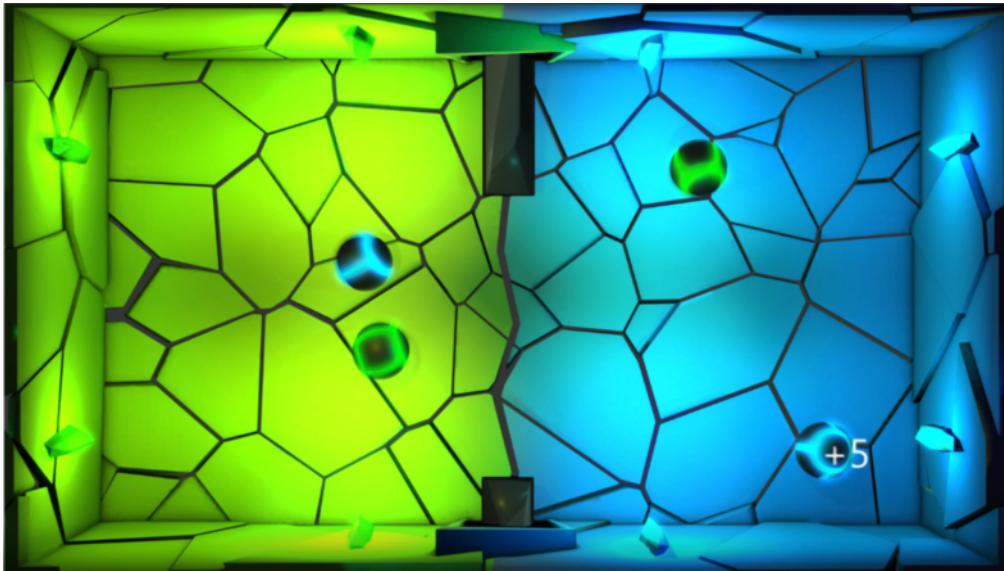
INSTRUCTION FOR PATIENT

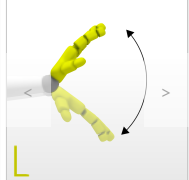
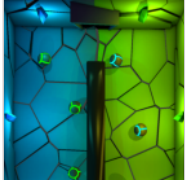
Pass or block the balls so that the blue balls are on the blue side and the green balls are on the green side of the screen.



DIVIDED ATTENTION SORTER

SAMPLE SETTINGS





◀

Difficulty

▶

1/3

Duration

<

>

90s

Range

0%

100%

<

>

Number of objects

<

>

4

Gap size

<

>

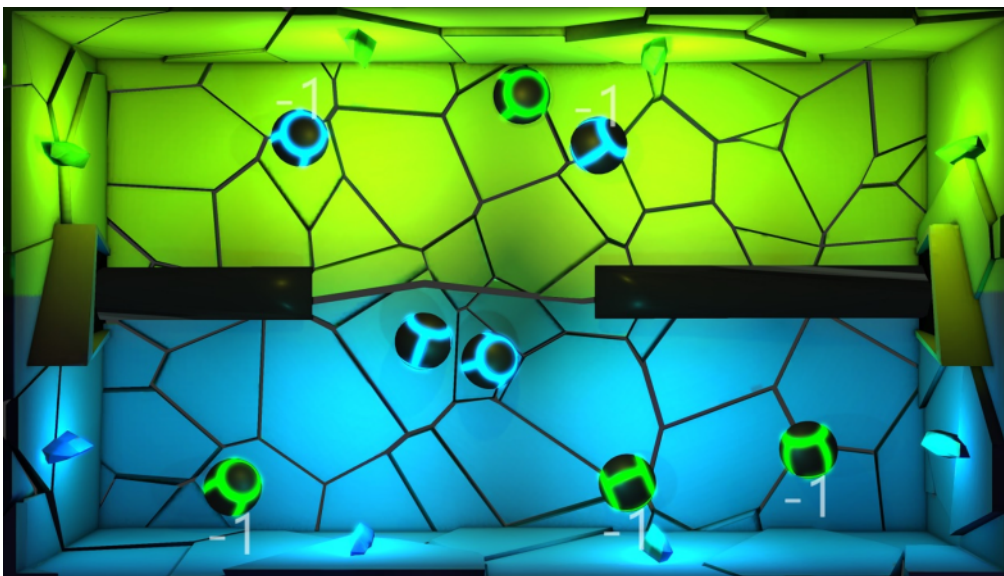
150%

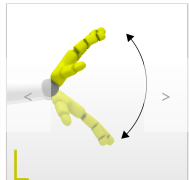
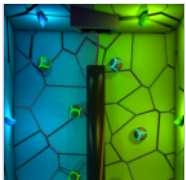
Speed of objects

<

>

100%





◀

Difficulty

▶

custom

Duration

<

>

90s

Range

0%

100%

<

>

Number of objects

<

>

8

Gap size

<

>

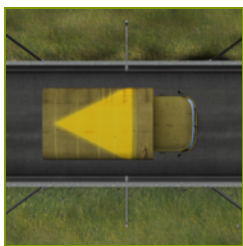
150%

Speed of objects

<

>

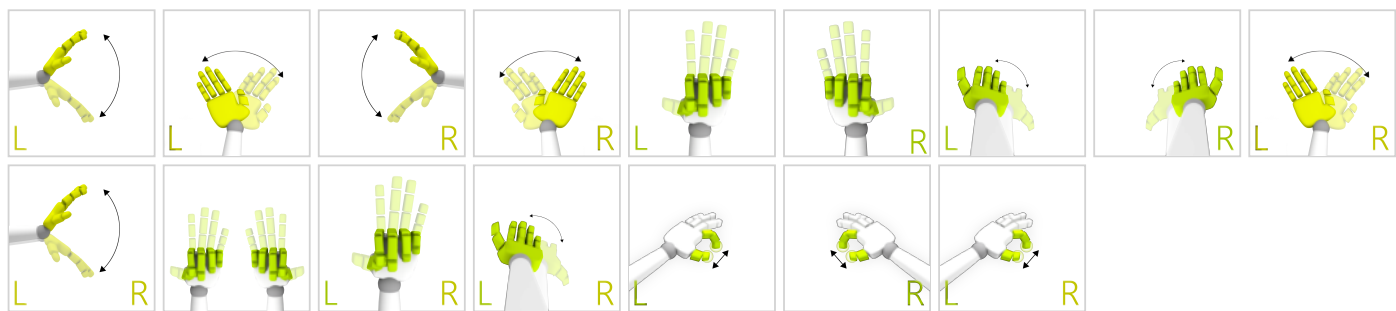
100%



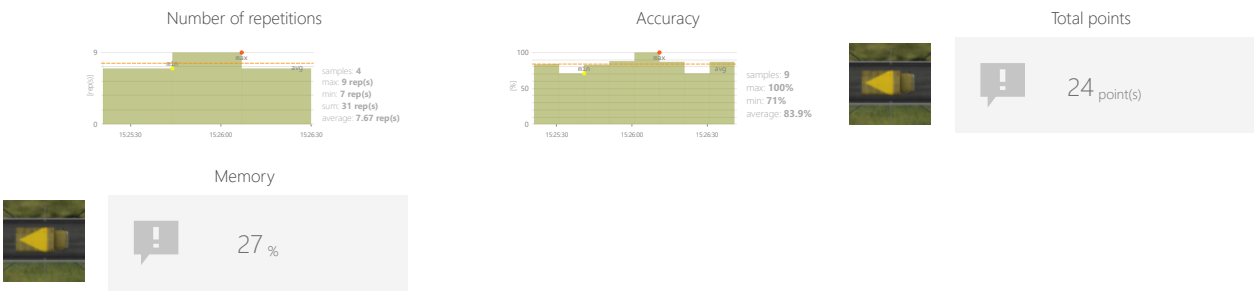
MEMORY TRUCKS

Measure and train individual's skills to memorize information.

CONTROL MODES



RESULTS



ADJUSTMENTS

- Task duration
- Range
- Variations

OBJECTIVES

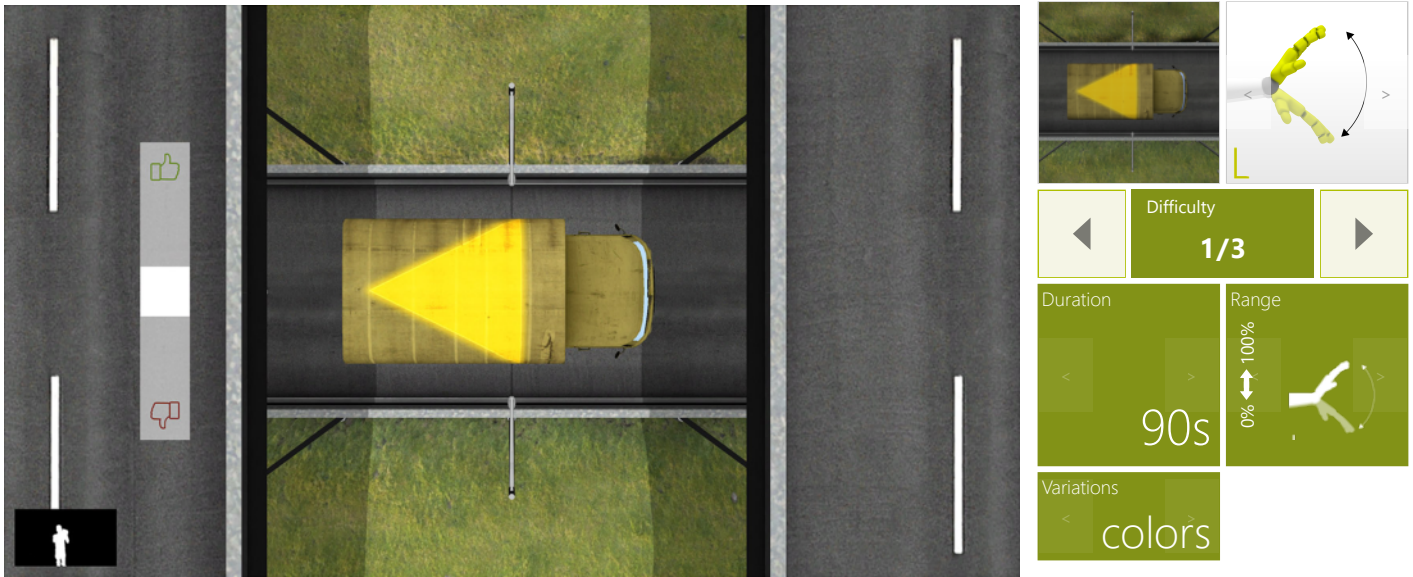
- Logical tasks
- Focusing
- Perceptivity

INSTRUCTION FOR PATIENT

Remember the shape and/or its color on the roof of the car you see. Decide with thumbs up or down whether the next car has the same shape and/or color on the roof as the previous one.



SAMPLE SETTINGS



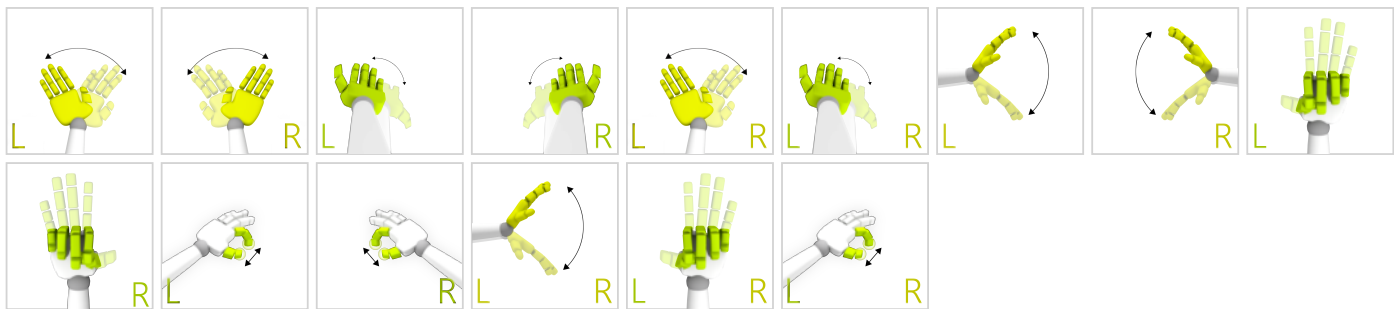


PROBLEM SOLVING

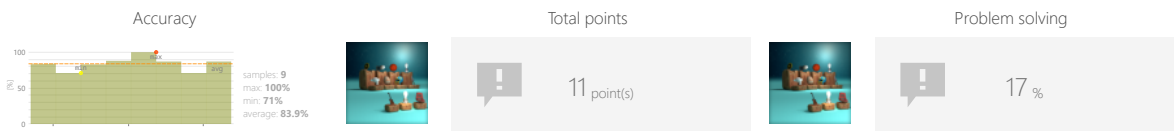
CLONES

Measure and train individual's skills to reach a solution of specific problems. Problem solving may include mathematical or systematic operations and can be a gauge of an individual's critical thinking skills.

CONTROL MODES



RESULTS



ADJUSTMENTS

- Task duration
- Time to complete action
- Range
- Number of pairs

OBJECTIVES

- Perceptivity
- Visual motor coordination
- Logical tasks

INSTRUCTION FOR PATIENT

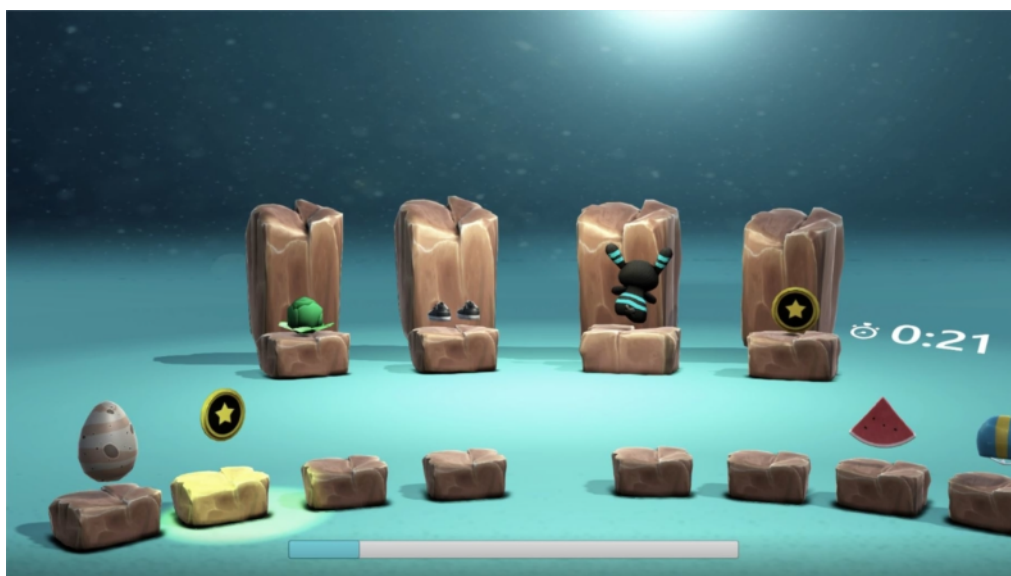
Select the item which has a pair on the screen.

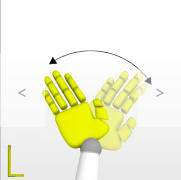



PROBLEM SOLVING

CLONES

SAMPLE SETTINGS





◀	Difficulty 1/3	▶
Duration 90s		Minitask duration 30s
Range 0% ↔ 100%		Number of pairs 4



SPECIALIZED

BLOOD PRESSURE

Specialized tasks and evaluations that collect data from multiple categories or do have a unique objectives.

CONTROL MODES



OBJECTIVES

- Monitor external parameters

INSTRUCTION FOR PATIENT

Measure yourself your blood pressure and type it in the result.