

**Partnering Outside the
Box**

**Digital and Artificial
Intelligence Integrated Tools to
Support Higher Education
Students with Dyslexia**

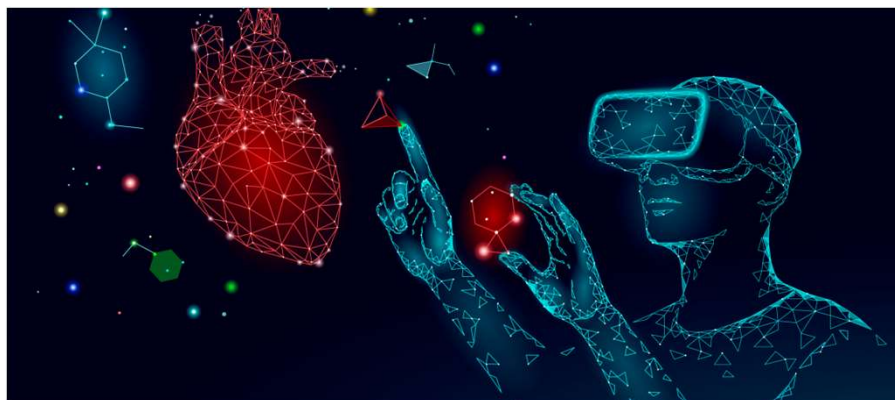
ToT: Training of Trainers

Córdoba - April 4-7th

Enrique Yeguas, PhDc

Pilar Aparicio, PhD

Sara Pinzi, PhD



VR App Tests

Familiarization VR

Contents

Hand Tracking

Stationary

Roomscale

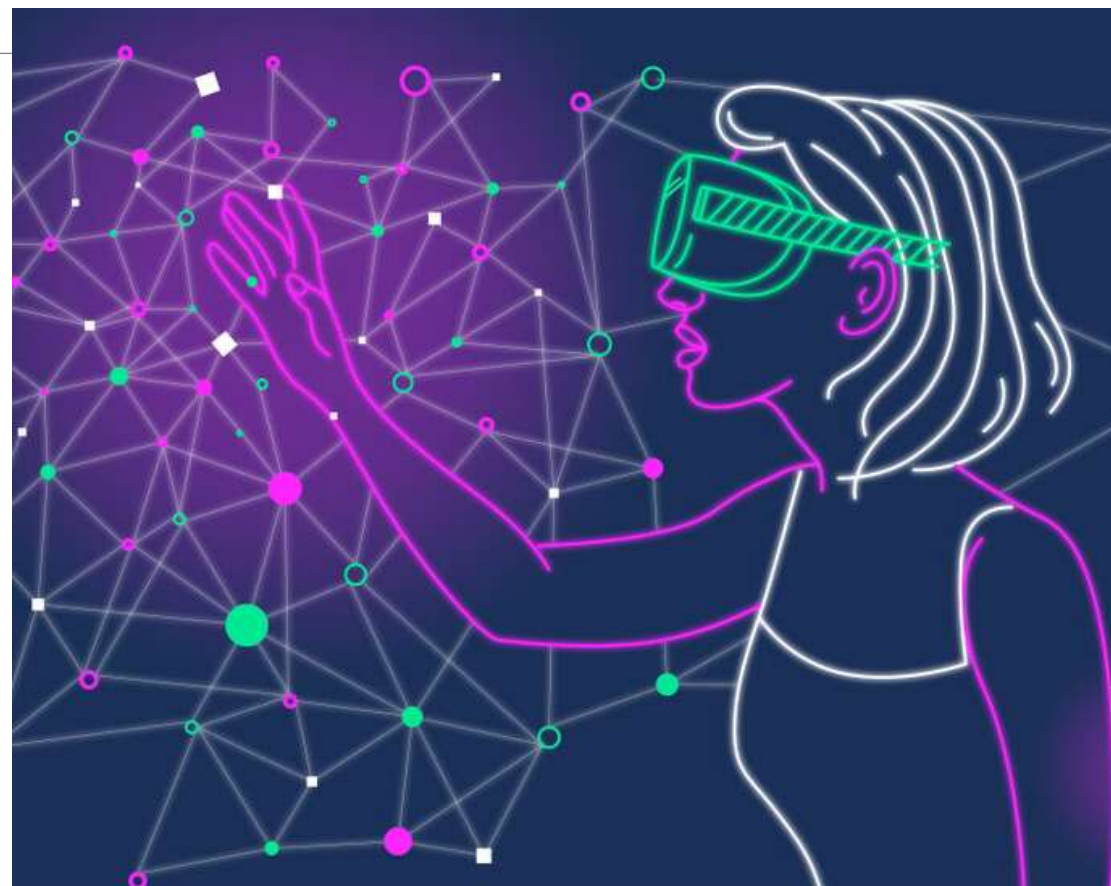
Fitness & Training

Experiences

Teaching

Utils

Empathy



PLAYER MODES



Sitting



Standing



Roomscale

SUPPORTED CONTROLLERS



Oculus Touch



Hand Tracking



No Hand Tracking

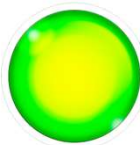
CONFORT RATING



Unrated



Moderate



Comfortable



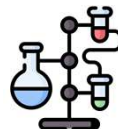
Intense

APP TYPE

Demo App. No upgrades. Offline. Only
for test purposes.
Unknown resources.



Free App. Can be upgraded.
Apps: Under All or Oculus.

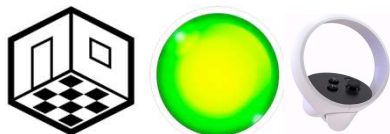


App Lab. Experimental.

VR Apps Test: Hand tracking

◦ Cubism

com.tvb.cubism

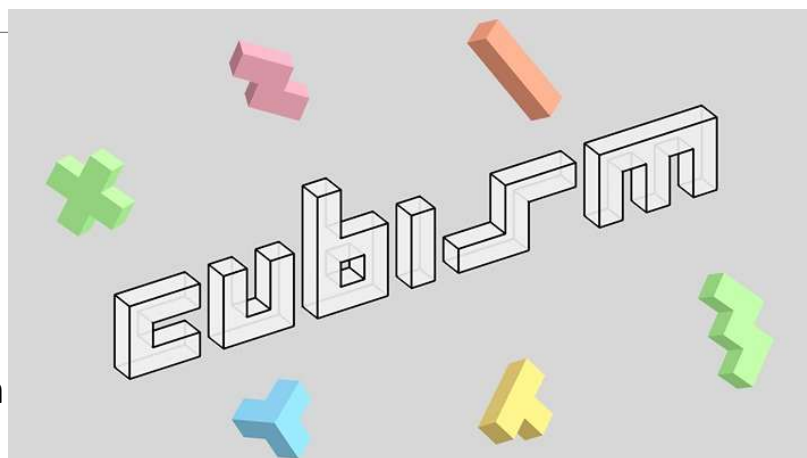


Educational, Puzzle, Relaxation/Meditation

◦ First steps with hand tracking [App Lab].



Arcade, Educational, Exploration

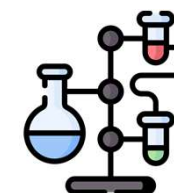


DEMO

Experimental

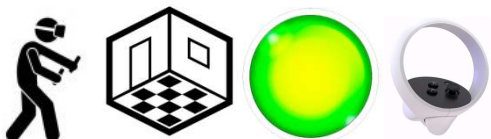


FREE



VR Apps Test: Hand tracking

◦ Elixir



Adventure, Casual, Narrative



◦ Hand Physics Lab

com.holonautic.HandPhysicsLab



Casual, Puzzle, Simulation

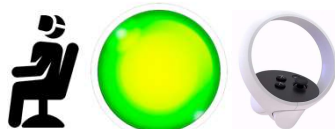


VR Apps Test: Hand tracking

Let's Create!

Pottery VR

com.idreams.potteryvrq



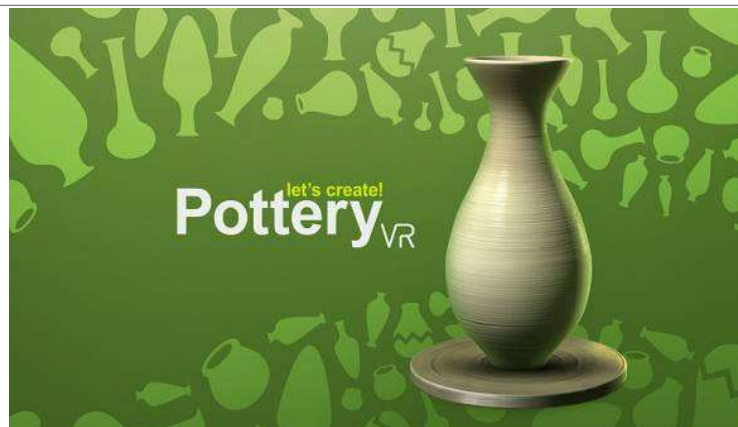
Art/Creativity, Casual, Relaxation/Meditation

Unplugged

com.Anotherway.UnpluggedVR



Arcade, Casual, Music



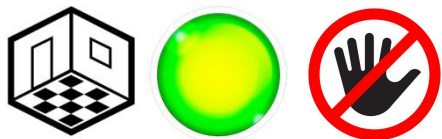
DEMO



DEMO

VR Apps Test: Stationary

First Steps

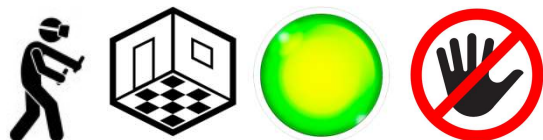


Arcade, Educational, Exploration



FREE

First Contact



Casual, Narrative, Simulation

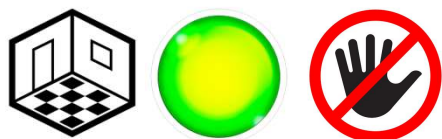


FREE

VR Apps Test: Stationary

Job Simulator

com.owlchemylabs.jobsimulator



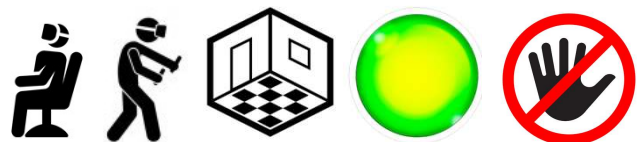
Casual, Food, Simulation



DEMO

Puzzling Places

com.RealitiesIO.puzzlingPlaces



Exploration, Puzzle, Relaxation/Meditation

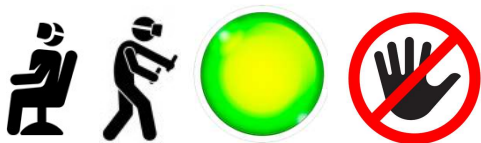


DEMO

VR Apps Test: Stationary

◦ Angry Birds VR: Isle of Pigs

com.resolutiongames.abvriop.santacruz



Casual, Puzzle

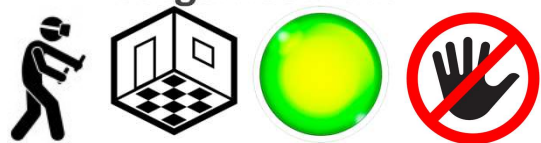


DEMO

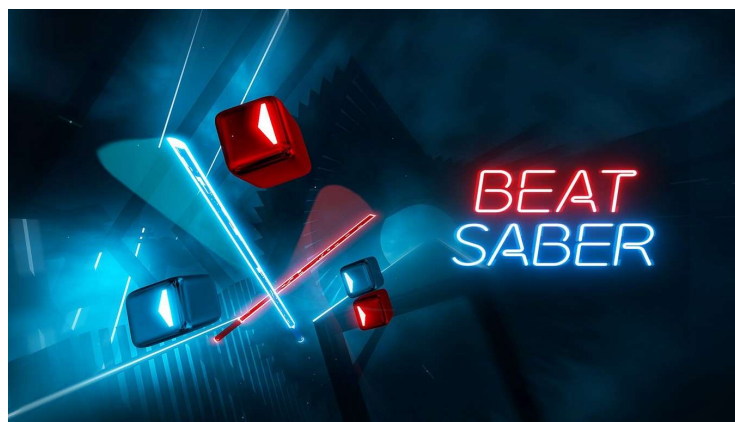
VR Apps Test: Stationary Action

◦ Beat Saber

com.beatgames.beatsaber



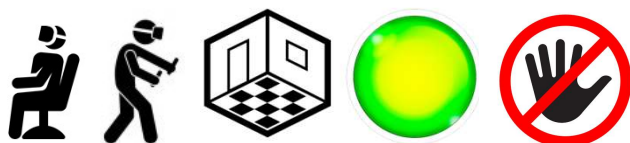
Casual, Music, Sports



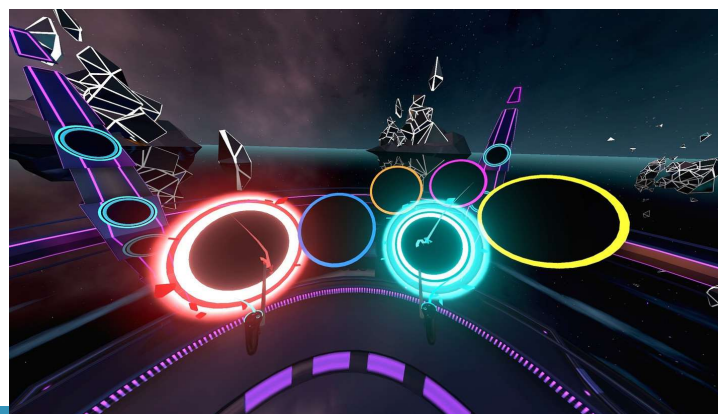
DEMO

◦ Virtuoso

com.Really.Virtuoso



Art/Creativity, Casual, Music

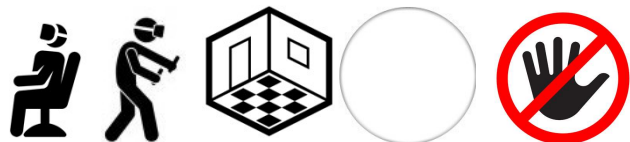


DEMO

Stationary Action: Sports

First Person Tennis (Tennis) [App Lab]

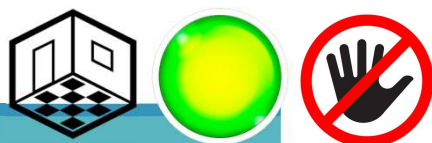
com.mikorigames.firstpersontennis



Action, Simulation, Sports

Eleven (Table Tennis)

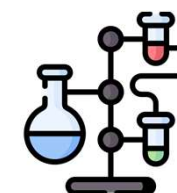
quest.eleven.forfunlabs



Simulation, Social, Sports



DEMO



DEMO

Locomotion Mode

- **Avatar Movement (Free Move)**

- When the experience requires you to move a character using some combination of thumbstick, button, headset, motion controllers, or gameplay states.
- This is the locomotion method used by a large majority of VR games today.
- You are in direct control of the speed, direction of movement, and orientation of the camera at all times.



◦ **Be careful! Free movement might be the surest way to make most players nauseous.**

Locomotion Mode

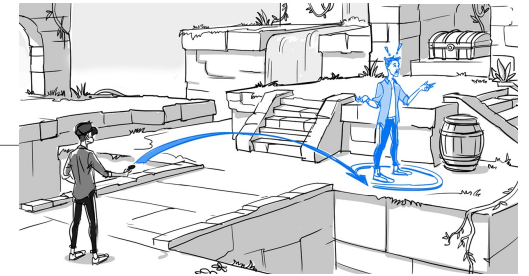
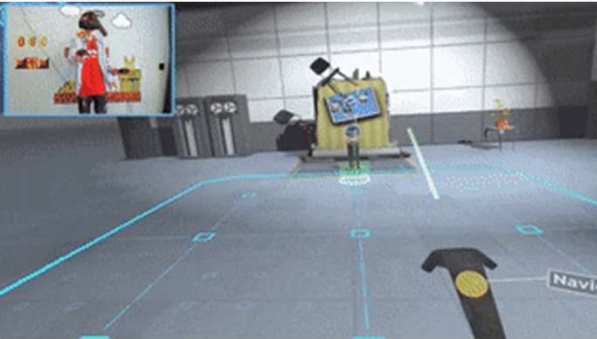
◦ Avatar Movement (Free Move)

- The allure of free locomotion is obvious, but it is also the simplest way to trigger motion sickness in the user.
- This is due to the clash between body position and what the brain perceives as the 'reality' of first-person movement in the virtual world.
- The high risk of nausea it carries is the reason so many VR experiences are seated, or use abstract solutions like **teleportation** to navigate space.

If you implement this badly a lot of people will feel ill. You need smooth movement.



Locomotion Mode



• Teleportation

- A teleport is an event that leads to a sudden change in the user's perspective. The additional benefit of teleportation is that unlike other types of movement, they are not always a form of continuous movement.
- This can be helpful for people sensitive to the side effects ofvection (visual illusion of self-motion in a stationary server.)



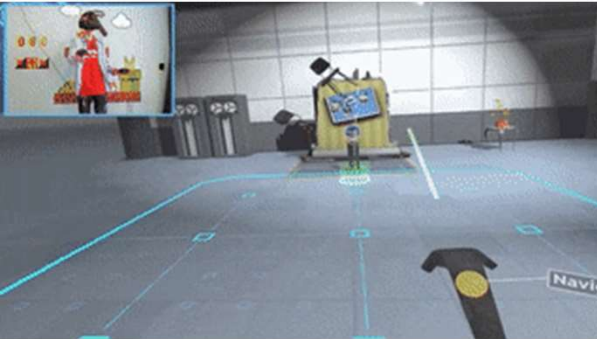
Thumbsticks:

- **Front and Back:** Select the location and Release for teleportation
- **Left and Right:** Rotate the Point of View.



Locomotion Mode

Teleportation



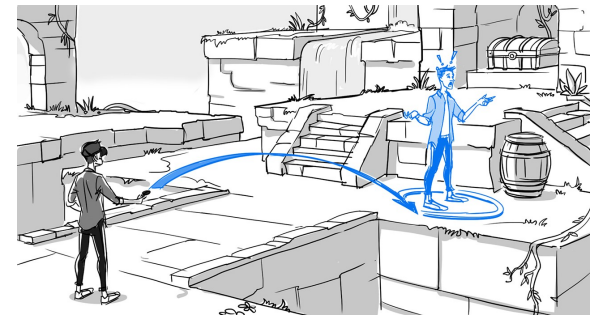
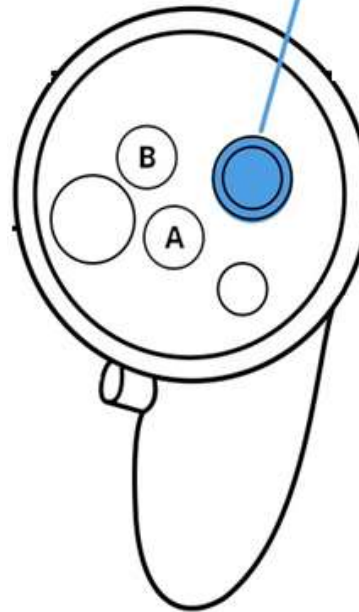
TELEPORT

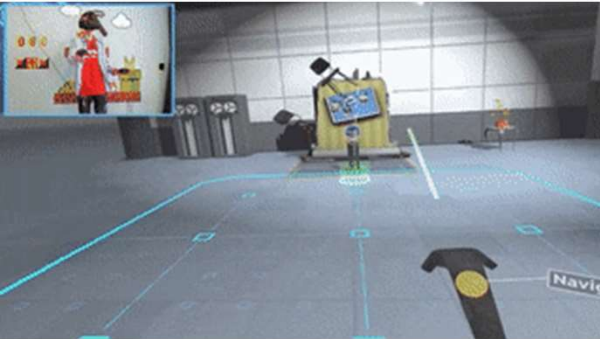
Push and hold **Joystick** forward then release.

INCREMENTAL TURN

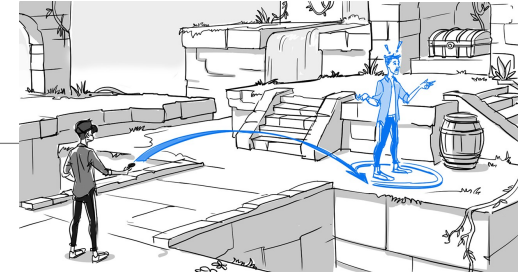
Tap joystick left/right.

MOVEMENT
Push joystick
forward/backward.

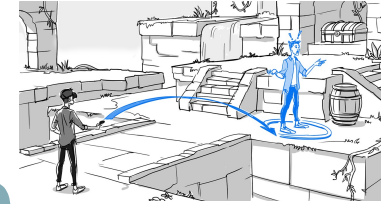




Locomotion Mode



- **Teleportation**
 - Teleportation can be integrated into the design by...
 - **Player-controlled teleports**, where the user selects the destination within legal game space or from predefined destinations.
 - Teleports to dynamic locations determined by **gameplay mechanics**.
 - **Automatic teleports** controlled by game logic (can be disorienting to users if they are not expecting it).

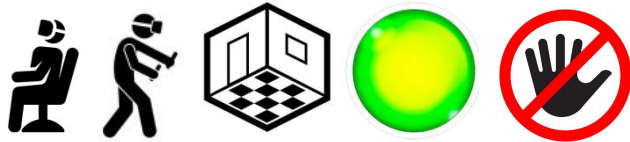


VR Apps Test: Roomscale

Locomotion: Thumbstick-triggered Teleportation

◦ Star Wars

Tales From the Galaxy's Edge
com.ilmxlab.taes



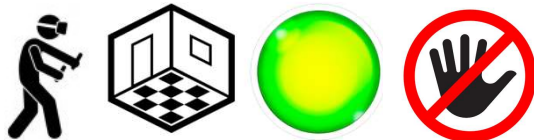
Action, Adventure, Narrative



DEMO

**Settings: Free Move
for Avatar Movement**

◦ Bogo



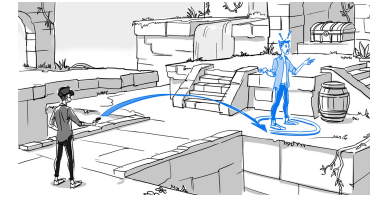
Casual, Narrative, Simulation



FREE

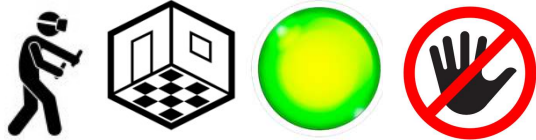
VR Apps Test: Roomscale

Locomotion: Thumbstick-triggered Teleportation



House Flipper VR

com.oculus.HouseFlipperVR



Art/Creativity, Casual, Relaxation/Meditation



DEMO

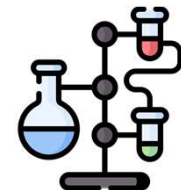
**Settings: Change
Locomotion Mode**

Pierhead 2 Arcade [App Lab]

com.mechabit.pierheadarcade2



DEMO



Locomotion Mode

World Pulling

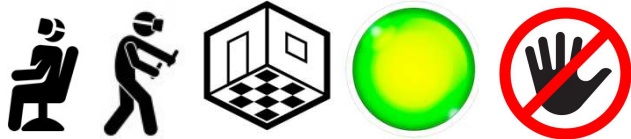
- World pulling is when the user is stationary until they grab some point in the world and pull or push it.
- This action shifts the perspective as the world moves to follow the push or pull motion.
- A few examples include scene movement, rock climbing, rockers, wall scaling, zero-gravity movement.



Roomscale & Continuous Movement

◦ Tilt Brush

com.google.tiltbrush



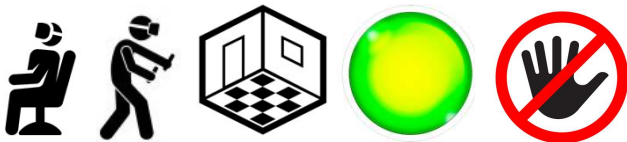
Art/Creativity, Casual, Productivity



DEMO

◦ SculptrVR

com.sculptrvrinc.sculptrvrapp



Art/Creativity, Exploration, Productivity



DEMO

Roomscale & Continuous Movement

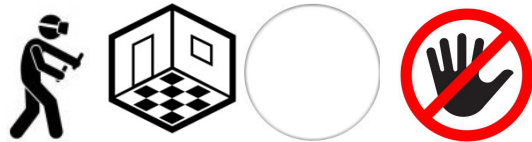
- To scale, rotate, or move your sketch, you can hold down both of the grip buttons on the sides of your controllers to grab the sketch. Then, move your hands to shrink, enlarge, or spin the sketch.



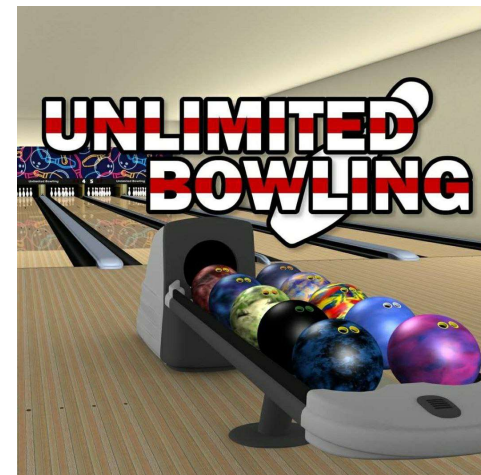
Roomscale & Continuous Movement

◦ Unlimited Bowling VR [App Lab]

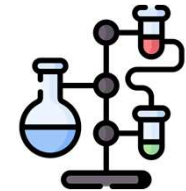
com.SPSoftwareProductions.UnlimitedBowlingVR



Simulation, Sports

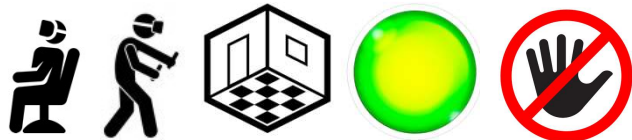


DEMO

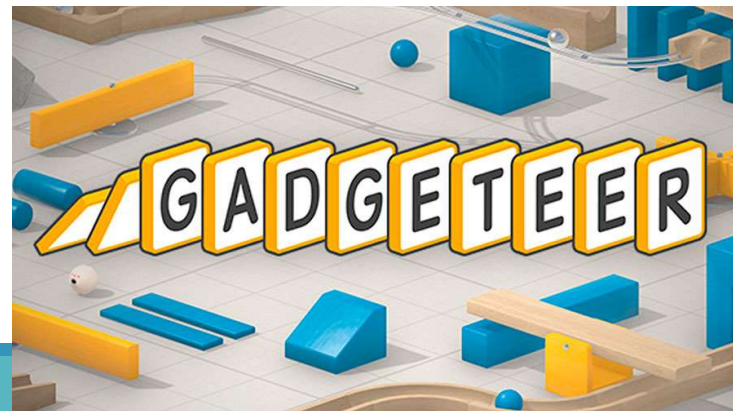


◦ Gadgeteer

com.metanaut.Gadgeteer



Puzzle, Simulation



DEMO

Locomotion Mode

- **Environmental movement**
- Environmental movement is when movement occurs as a byproduct of where the person is, what they're doing, or what else is going on in the virtual world.
 - Dynamic scenes.
 - 3rd person control.
 - World management.

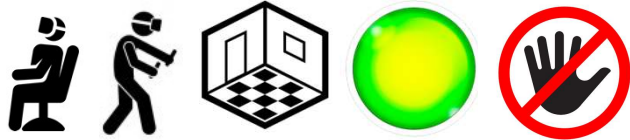


Roomscale & Dynamic scenes

DEMO

◦ A Fisherman's Tale

com.innerspacevr.afirshermantale



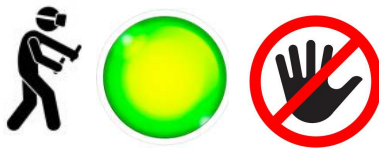
Adventure, Narrative, Puzzle



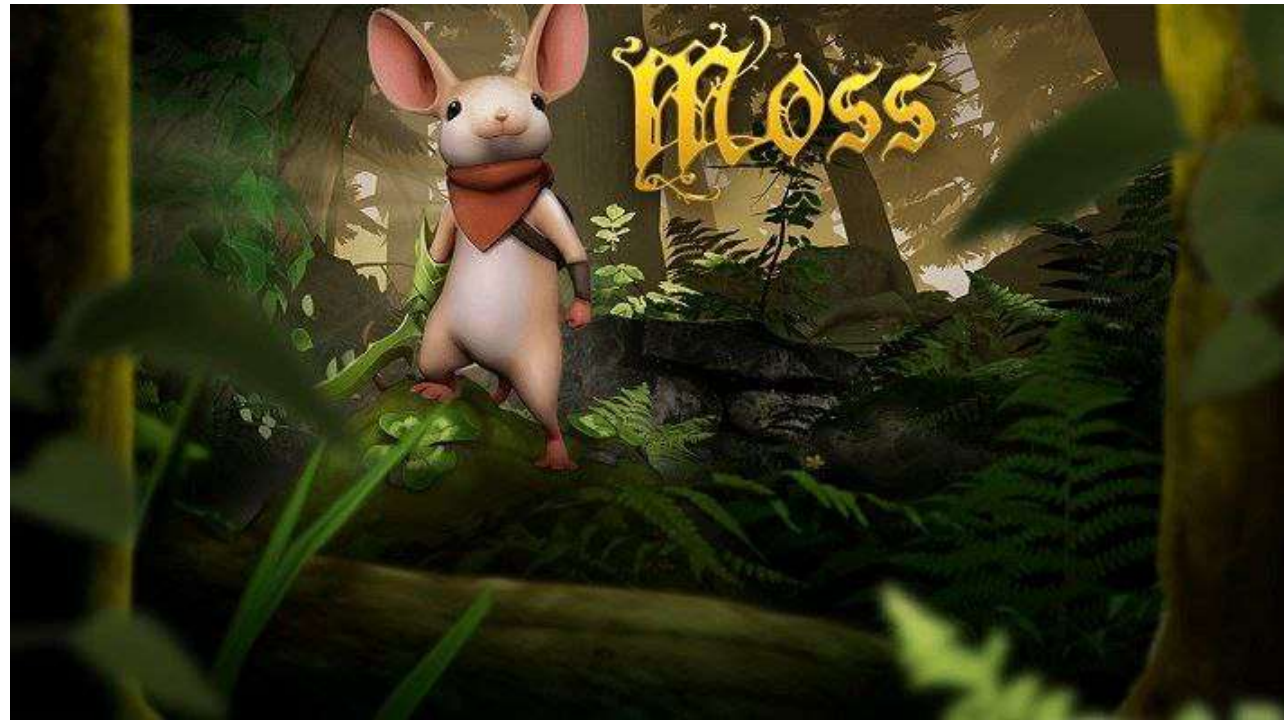
Wide Roomscale: 3rd person World management

○ Moss

com.polyarc.MossGame



Action, Adventure, Puzzle



DEMO

VR Apps Test: Fitness

- **Shapelt**
(Bodycombat)
com.odders.shapeit



Casual, Music, Sports

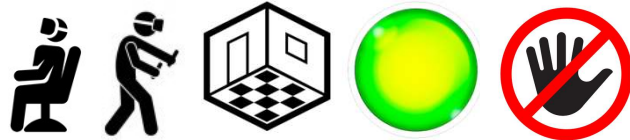


Appropriate for many but certainly not everyone!

VR Apps Test: Experiences

Other Sight

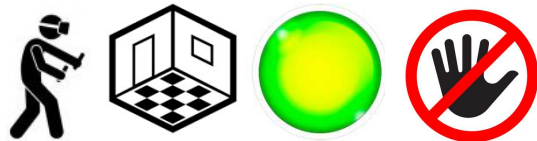
com.raizmedia.othersight



Exploration, Travel



Anne Frank House VR



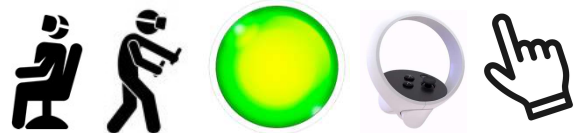
Documentary & History, Educational, Movie



VR Apps Test: Experiences

- **Titans of Space**

com.drashvr.titansofspacevr6dof



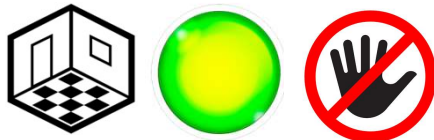
Educational, Space/Universe, Travel



DEMO

- **National Geographic Explore VR**

com.forcefieldxr.explorevr



Educational, Exploration, Travel

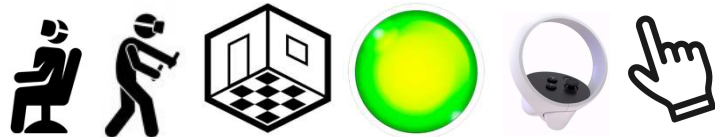


DEMO

VR Apps Test: Experiences

◦ Guided Meditation

com.CubicleNinjas.GuidedmeditationVRQuest



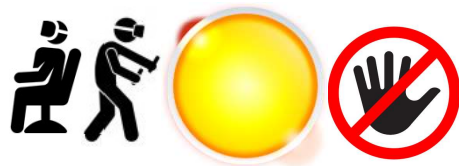
Casual, Relaxation/Meditation, Travel



DEMO

◦ The Climb

com.crytek.climb



World Pulling

Arcade, Exploration, Sports



DEMO



Locomotion Mode

- **Scripted movement**
- Scripted movement is when the virtual camera moves along a predefined path of motion.
- Sometimes, but not always, the orientation of the camera is part of this movement.
- A few examples of scripted movement include roller coasters, theme park rides, trains, and cinematic camera moves.



Locomotion Mode

- **Steering movement**
- With steering movement, the player is controlling artificial motion that continues to move without continuous input, such as driving a car.
- Typically, this kind of movement has inertia and momentum.
- Unlike avatar movement, steering movement prevents immediate starts, stops, or changes in direction.

VR Apps Test: Experiences & Fears

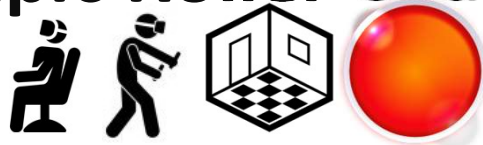
DEMO

- Richie's Plank Experience
com.ToastVR.RichiesPlankExperience

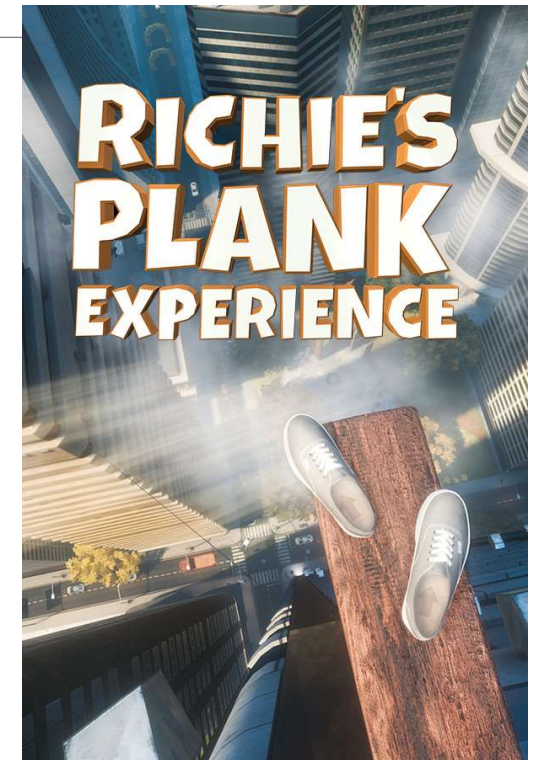


Arcade, Flying, Simulation

- Epic Roller Coasters



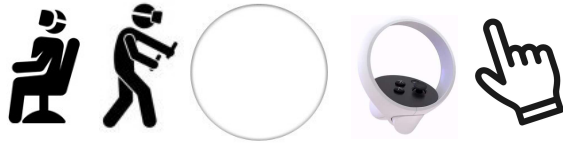
Racing, Roller Coaster, Shooter



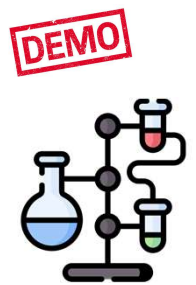
FREE

VR Apps Test: Experiences & Fears

- **Submarine [App Lab]**
com.extremesoft.submarinevr



Exploration, Relaxation/Meditation, Simulation



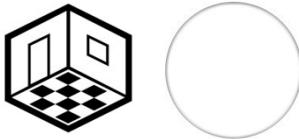
VR Apps Test: Teaching

- **Anatomy Puzzle [App Lab]**
com.mgdigital.AnatomyPuzzle



Educational

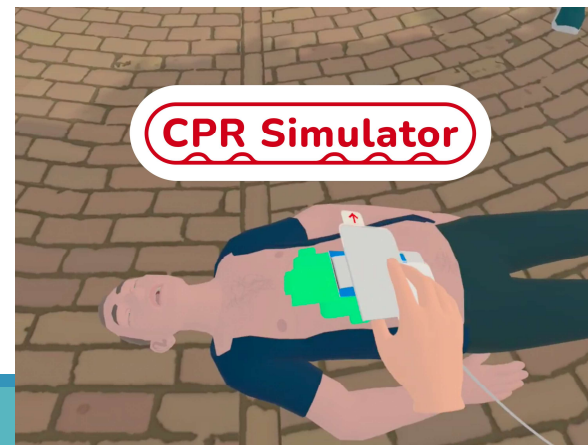
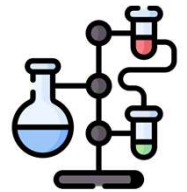
- **SundSim VR [App Lab]**
(CPR Simulator)
com.AATEVR.SundSim.CPR



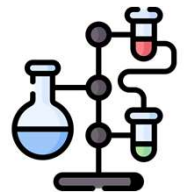
Educational, Medicine, Simulation



DEMO



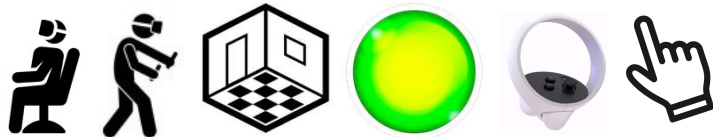
DEMO



VR Apps Test: Teaching

- **Blueplanet VR Explore**

com.blueplanetvr.blueplanetvr_explore_alpha



360 Experience, Exploration, Travel



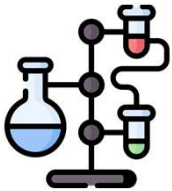
DEMO

- **Art Plunge [App Lab]**

com.spaceplunge.artplungeoq



DEMO

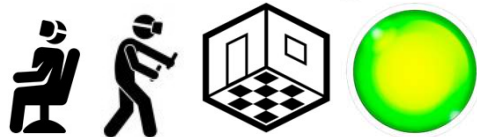


VR Apps Test: Teaching

DEMO

Star Chart VR

com.escapistgames.starchartvr.quest



Documentary & History, Educational, Simulation, Space/Universe



Homestar VR

com.pocket.homestarrvsp



360 Experience, Relaxation/Meditation, Space/Universe



DEMO

VR Apps Test: Teaching

DEMO

- Learn Languages VR by Mondly

com.ATiStudios.LearnLanguagesVRbyMondly

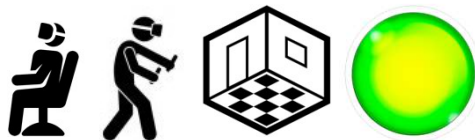


Casual, Educational, Productivity



- com.picselica Ocean Rift

com.picselica.OceanRiftFullQuest



Educational, Exploration, Travel



DEMO

VR Apps Test: Utils

DEMO

◦ Wander

com.parkline.wander



360 Experience, Exploration, Travel



◦ Vermillion

com.TheAviary.Vermillionbg2



Art/Creativity, Simulation



DEMO

VR Apps Test: Empathy



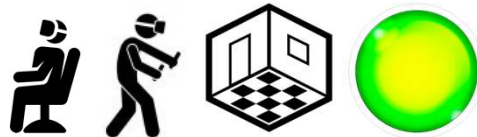
• The Key



Adventure, Documentary & History,
Narrative



• Home After War



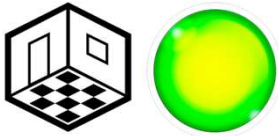
Documentary & History,
Narrative, News & Information



VR Apps Test: Empathy



- **We Live Here**



Documentary & History, Educational,
Narrative



- **Notes on Blindness**



360 Experience, Documentary & History,
Narrative

