

OPHTHAVIZ™
Cataract Surgery Simulator

ADVANCED CATARACT SURGERY SIMULATOR

Master Cataract Surgery Before the OT



Redefining **Cataract Surgery Training**

OphthaViz is a next-generation cataract surgery simulator that combines structured learning, real surgical workflows, and immersive technology to deliver a complete ophthalmic skill-building experience.

Designed with clinicians and educators, it ensures:

- Clinical accuracy
- Step-by-step procedural training
- Skill-based progression

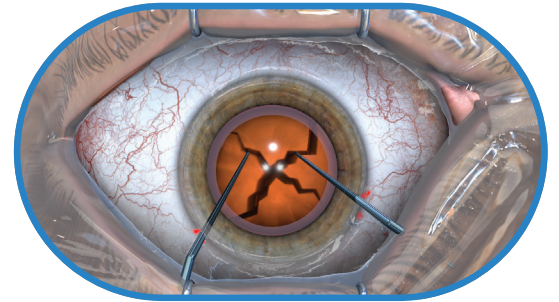
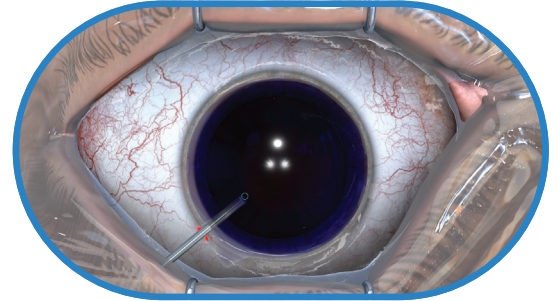
What Do We Offer?



10+ Advanced Surgical Complications Training

● **Gain hands-on experience in managing complex, real-world cataract surgery challenges with guided simulation training.**

- Errant rhexis tear
- Enlarging a small rhexis
- Iris hooks in non-dilating pupil / floppy iris syndrome
- Corneal burn
- Iris prolapse
- Hypermature intumescent cataract management
- Capsular tension ring (CTR) implantation
- Phaco in phacodonesis (pseudoexfoliation zonulopathy)
- Phaco in shallow anterior chamber (hyperopic eye)
- Phaco in high myopia
- Anterior vitrectomy after posterior capsule rupture
- Hard cataract management
- Poor wound construction & wound leak (including side port leaks)



Structured Learning & Evaluation

- Role-based system: Admin | Teacher | Student
- Guided modules with progress tracking
- Performance reports & analytics
- Teacher evaluation & feedback system



Pre-Operative & Entry Precision

- Interactive WHO safety checklist
- Realistic eye drop simulation
- Anatomically accurate incision with haptic feedback





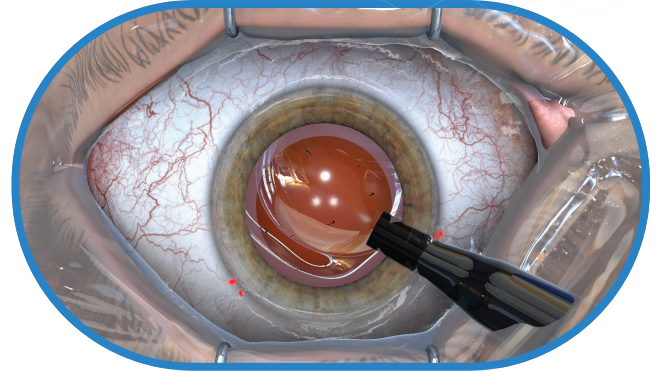
Complete Cataract Surgery Workflow

- Anterior Chamber Procedures – Realistic staining & OVD injection
- Capsulotomy & Capsulorrhexis – Controlled tearing with resistance
- Hydrodissection & Nucleus Mobilization – Fluid dynamics & rotation
- Phacoemulsification – Sculpting, chopping & pedal integration
- Nucleus Removal & Cortical Aspiration – Dual-hand coordination
- IOL Insertion & Positioning – Injector delivery & unfolding
- Wound Closure & Cleanup – Final sealing simulation



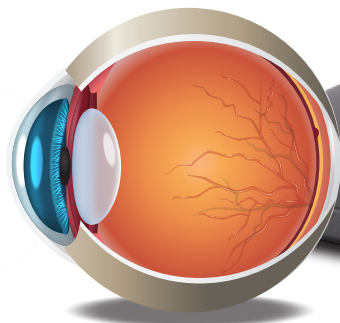
Immersive Technology

- Bi-manual haptic feedback system
- Real-time instrument interaction
- VR-enabled depth perception
- Replicates actual OT workflow



ADVANCED HARDWARE SETUP FOR REALISTIC SURGICAL SIMULATION

- **Computing Unit / CPU**
 - Latest Gen Intel i7 Processor, 16 GB DDR5 RAM, 512 GB SSD, High-end Graphics Card
- **Display Unit**
 - 14-inch LED Monitor
- **Stereo Visualization Head Display**
 - Microscope-like immersive viewing experience
- **Haptic Devices (Pair)**
 - Enables precise handling of virtual surgical instruments
- **Foot Pedals System**
 - Bed Adjuster Pedal – Dual switch design for raising and lowering the operating bed
 - Phaco Two-Axis Foot Pedal (4 Buttons) – Controls vacuum and fluid dynamics during surgery
 - Microscope Adjuster Pedal – Axial joystick for positioning + foot controls for zoom in/out



Why Choose **Ophthaviz** ?

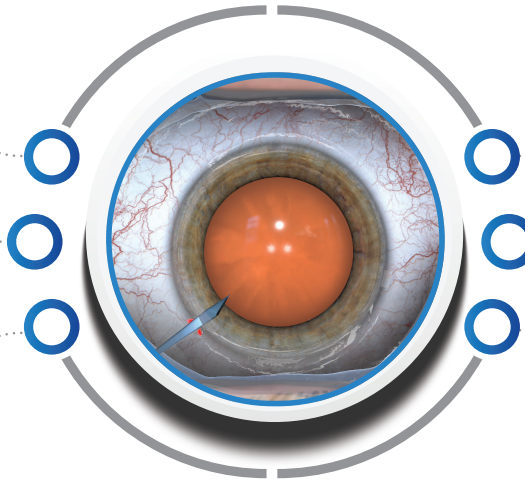
Built for ophthalmic surgical training



Complete cataract workflow



Enhances precision & coordination



Reduces wet lab dependency



Builds surgical confidence



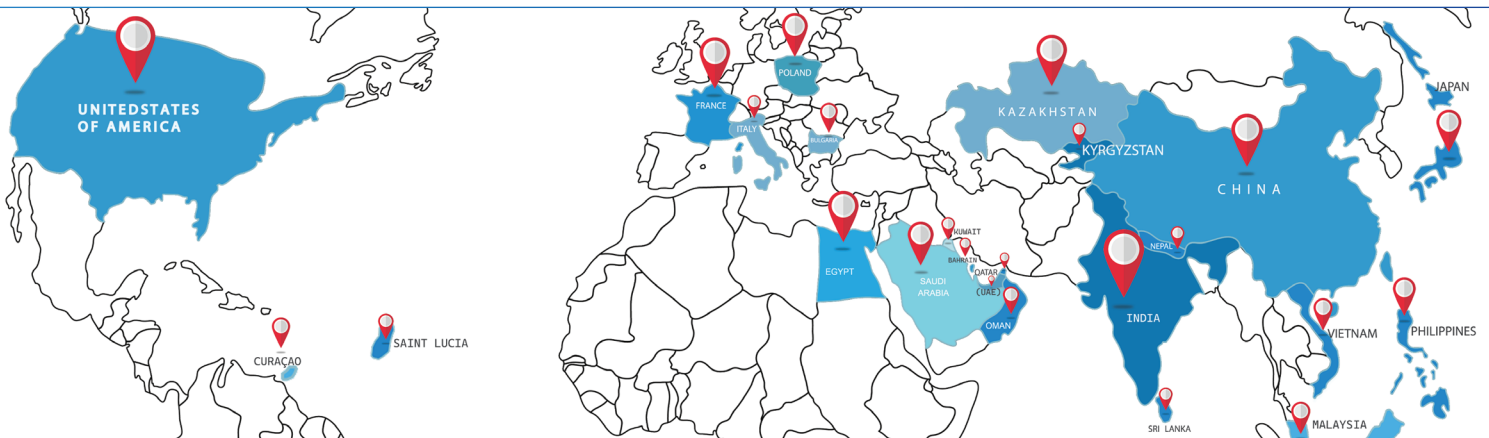
Ideal for:

- Medical Colleges
- Teaching Hospitals
- Ophthalmology Training Centers
- Medical Skill Labs

OUR SIMULATION SYSTEM



OUR PRESENCE



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