

# Jeffrey Jacobson, Ph.D.

CEO, EnterpriseVR

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Consultant in technology and applications of Virtual Reality, working with clients to understand where virtual, augmented or mixed reality can solve their problems. I collaborate with the client to build the workflow and organization needed. I also locate, customize, or create the technical solutions needed. Currently collaborating with professionals in Architecture and Construction on using VR to improve communication with *their* clients and accelerate the design process.

My doctorate and later work in Information Science centers on human perception, action, and learning in three-dimensional space, the foundation of user experience in VR. Strong technical skills in computer science with 20 years of building VR systems, mastering every generation of VR technology. Created effective solutions with experts in several industries.

## **SELECTED PROJECTS**

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Managed budgets, schedules, technologies, testing, integration, and delivery. My teams were often diverse including artists, programmers, sound FX people, scriptwriters, content experts (e.g. doctors, architects, egyptologists, educators), actors, and more. Used a range of VR related technologies such as Unity3D, Unreal Engine, 3DS Maxx, Photoshop, Revit, C++, and much more. For the full list of projects and activities, see <http://publicvr.org/jacobsonCV.html>

**Peer Reviews for Research Funding**, National Science Foundation, Washington, DC  
February, 2015

- On funding advice committee for proposed research in computer technology for education.

**Interactive Building Facade and Digital Signage Visualization**, Sensory Interactive, Boston, MA  
March 2015

- VR simulation of buildings with digital signs. Navigate and switch between design options.

**Design and Production Team for VR Teamwork Trainer For Surgeons**, Q4Calm Inc., Boston, MA  
February and March, 2015

- Worked with Dr. Naren Gupta to design a VR trainer to help surgeons improve teamwork skills. Assembled an expert team to do the work. Project now awaits funding.

**Visual Training Materials**, New England Tractor Trailer Training School

2012 – 2014 Somers, CT; North Andover, MA; Pawtucket, RI

- Collaborated with instructors to invent visual aids for learning certain complex maneuvers.
- Improved test pass rates with those maneuvers (e.g. rates doubled in North Andover).

**Virtual Egyptian Temple**, Connecticut Science Center, Hartford, CT & PublicVR, Boston, MA

2014 [http://publicvr.org/html/pro\\_egypt.html](http://publicvr.org/html/pro_egypt.html),

2006 – 2010 CMNH, Pittsburgh, PA, [http://publicvr.org/html/ins\\_earththeater.html](http://publicvr.org/html/ins_earththeater.html)

- In both museums' immersive theaters, installed the temple, which a presenter navigates.
- Audience response was enthusiastic. Both museums can now develop these virtual tours.

**Egyptian Oracle Performance**, National Endowment for the Humanities & PublicVR, Boston, MA

2010 - 2013 [http://publicvr.org/html/pro\\_oracle.html](http://publicvr.org/html/pro_oracle.html)

- Built a mixed-reality performance with live actors and digital puppet "in" the virtual temple.
- Audience members participated in an authentic ancient Egyptian religious celebration.

**The Living Forest**, Complex Systems Research Center, University of New Hampshire, Durham, NH (Supervising scientist: Dr. Schloss) and PublicVR, Boston, MA

2011, 2013 [http://publicvr.org/html/pro\\_forest.html](http://publicvr.org/html/pro_forest.html)

<http://publicvr.org/publications/Schloss2012.pdf>

- Created an interactive virtual forest for digital dome theaters showing the forest life cycle.
- Audiences participated in game-like field trip activities, led by a teacher/guide.

**CaveUT**, PublicVR, Boston, MA

2000-2010, [http://publicvr.org/html/pro\\_caveut.html](http://publicvr.org/html/pro_caveut.html)

- Invented CaveUT, free software for immersive VR displays with the Unreal Engine.
- Used in educational and experimental projects, attracting many contributions.
- Over 500 citations in scientific literature.

**Gates of Horus Game and Research**, Carnegie Museum of Nat. History, U. of Pgh, PA, PublicVR, MA

2004 – 2008 [http://publicvr.org/html/pro\\_gates.html](http://publicvr.org/html/pro_gates.html)

<http://publicvr.org/publications/IJGCMS-PublicDraft.pdf>

- Built a game based on the Virtual Egyptian Temple, for a desktop PC or digital dome.
- Proved superior learning of the architectural space with VR, first published study of its kind.

**Medical Virtual Reality Center (MVRC)**, University of Pittsburgh Medical Center Pittsburgh, PA,

1999-2002, & 2006-2007 <http://www.mvrc.pitt.edu/>

- Built the MVRC lab and a VR simulator for research and treatment of balance disorders.
- The MVRC lab continues to support high quality research and treatment to this day.

## **WORK EXPERIENCE**

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- **CEO**, EnterpriseVR, Boston, MA 2008-present  
We collaborate with businesses to develop VR solutions. See projects, above.
- **Executive Director**, PublicVR, Boston, MA  
2004 – 2015, <http://publicvr.org>  
Founded this 501(c)(3) for VR software and research in education. Raised funds and wrote grants (NEH, NSF, NFF). Conceived and managed projects (see above). Mentored interns.
- **Strategic and Technical Advisor**, Curtin University, Perth, Australia  
December, 2013 & Jan 2014, <http://research.humanities.curtin.edu.au/projects/hive>  
Advised them on the best uses for their new VR lab, future programs, and later expansion.

## **PROFESSIONAL ACTIVITIES AND PUBLICATIONS**

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- Co-Organizer, BostonVR Meetup Group <http://www.meetup.com/Boston-Virtual-Reality/>
- In 2015: Spoke on VR at Harvard. Tufts Medical, and the Children's Hospital. Was a mentor at the Tufts Medical Hackathon—teams I advised won 1<sup>st</sup> and 3<sup>rd</sup> place out of 30 teams.
- Published over fifty peer-reviewed scholarly articles and as many invited articles. See: <http://publicvr.org/JacobsonCV.html>

## **EDUCATION**

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Ph.D. Information Science – University of Pittsburgh, Pittsburgh, PA

BA in Computer Science – University of Texas at Austin, Austin, TX