Michael Thomas Woodard

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Education

Oklahoma State University, Stillwater, OK   Graduated: May 2018
Bachelor of Science in Computer Science
Bachelor of Science in Mathematics

Shipped Titles

The Last Light – *Magic Leap 1*   Tentative Release: May 2020
- Narrative AR experience created in Unity that presents story pieces via diorama scale sets
- Designed a procedural placement system that would find open spaces on the user's walls
- Created a multi-lightmap system that could blend between lightmaps via Unity's timeline
- Developed a system that would gather performance timings from our device. Using Node and Express, these timings would be analyzed and charted on an internal facing website

Work Experience

Associate Software Engineer, Games -- *Magic Leap*   May 2019 - May 2020
- Worked largely in Unity to create efficient AR games that took advantage of Spatial Computing
- Developed systems that worked both with hand tracking and a traditional controller input
- Used an active world mesh to help connect the AR environment to the user's actual world

Research Assistant – *Dr. Henry Segerman, Oklahoma State University*   January 2018 - March 2019
- Used three.js and WebGL to create a raymarched visualization of hyperbolic geometry
- Developed local and global scenes that allow for infinite and individual objects, respectively
- Coded extensively in GLSL to allow for non-traditional 3D scene frameworks

Proficiencies

Programming Languages: C#, C/C++, JavaScript, Node.js, Express, Python, GLSL, Cg, Three.js, Java
Software: Visual Studio, Unity, Unreal Engine, Perforce, Blender, Git, SVN, Photoshop, After Effects
Hardware: Magic Leap 1, HTC Vive, Valve Index

Awards

We Are Mathematics, National Science Foundation -- *Non-Euclidean Virtual Reality*   2019
- Used raymarching to visualize an infinite negatively curved space (hyperbolic space).
- Developed as a WebVR app and was compatible with VR headsets.

Library Creativity Award, Oklahoma State University -- Slide Puzzle Duality   2017
- Created an interactive Virtual Reality game using Unity and the HTC Vive
- Users interact with a fully functioning slide puzzle which sources live scenes as the images

Organizations

Video Game Developer's Club of Okstate - *President, Founder*   September 2015 - May 2018
- Established an organization to act as a meeting place for those interested in game development
- Manage events that act as both a source for learning the subject and as a forum for members
- Led a small team in the development of a 3D game to be showcased at Heartland Gaming Expo
- Delegate duties to other executive officers in the club and ensure visibility on campus