Alexander Jaeger

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Education

University of Arkansas At Little Rock Little Rock, Arkansas
M.S., Information Science *Expected December 2018*
- Relevant courses: Information Visualization, Augmented Reality

University of Arkansas At Little Rock Little Rock, Arkansas
B.S. Computer Science *December 2016*
- Relevant courses: Fundamentals of Virtual Reality, Interactive Computer Graphics

Arkansas at School for Mathematics, Sciences, and the Arts Hot Springs, Arkansas
High School Diploma *May 2014*

Work Experience

Halliburton Landmark Houston, Texas
Summer Computer Graphics Intern *June 2017 - Aug. 2017*
- Brought engineering models into a shared AR / VR space where users can see each other and have limited interaction support
- Used Unity3D to produce a single project for the Microsoft Hololens, HTC Vive, Android and Desktop clients.
- Worked on a team of 6-7 people and used Git to manage source code.

UA Little Rock Emerging Analytics Center Little Rock, AR
Graduate Assistant *September 2014 - Present*
- Used Unity3D, C#, C++ and OpenGL to produce Virtual and Augmented Reality Applications
- Collaborated with team members to complete projects
- Lead Demonstations and provided information about current projects to potential clients

Projects

CAVE In A Box, Master's Thesis
Emerging Analytics Center, UA Little Rock *Feburary 2016 - Present*
- Designed a CAVE that is focused on mobility and low barrier of entry
- Designed supplemental software in Unity3D and Python to allow other developers to build applications for this CAVE
- Used Autodesk Inventor to design the structure and then built it by hand in the local workshop.
- Presented at the 2016 Arkansas EPSCoR/IDeA Foundation Conference

Haptic Force Feedback
Emerging Analytics Center, UA Little Rock *April 2015 - August 2015*
- Developed a physics simulation in OpenGL and C++ to test a Haption 6DOF Robotic Arm.
- Designed a library and supplemental training materials to make it easier for other developers to learn.

Virtual Reality Touch Table
Emerging Analytics Center, UA Little Rock *May 2015 - October 2015*

- Designed a structure to hold 2 consumer lcd touch screens to create a Virtual Reality experience.
- Shown at the 2015 Supercomputing Conference in Austin, Texas
- Shown at the 2015 Virtual Reality Summit in New York, New York

Stair Climbing Robot, High School Thesis
Arkansas School for Mathematics, Sciences and the Arts   *January 2013 - Feburary 2014*

- Designed a Stair Climbing Robot to aid personnel as my end of term project (thesis). Presented at the 2014 FIRM Competition. I recieved second place in the Mechanical Engineering portion.
- Worked with Carl Frank and Nicholas Seward to design this robot in Autodesk Inventor. Used a workshop to construct using wood and 3D printing. Used a Raspberry Pi and Arduino to drive the robot. The Raspberry Pi handled communication and preiphials. The Arduino handled the drivetrain and recieved commands from the Raspberry Pi.

Sign Construction, Eagle Scout Project
Emerging Analytics Center, UA Little Rock   *March 2014 - June 2014*

- Volunteer work for the local Veteran's Memorial Hall exceeding 100 man hours.
- Designed a sign for their newly constructed building using Autodesk Inventor
- Held design meetings with beneficiarys to confirm designs and prototypes
- Orchestrated volunteers and materials remotely in order to complete project.

Conference Proceedings

Fred's Happy Factory   DOI: 10.2312/egve.20161454
ICAT-EGVE 2016 - Posters and Demos   *October 2016*

- Coauthored with Aaron Baggett, Benjamin Lewis, and Isaac Wardlaw
- Designed as our final project for the Intro to Virtual Reality course taught by Dr. Carolina Cruz-Niera
- Users acted as a small helper robot named FRED as he tries to cheer his coworkers up around the office.

Unity - Unity Integration of OpenCV and Vuforia for Augmented Reality   Page 11
IEEE Conference on Virtual Reality - Tutorial   *March 2015*

- Coauthored with Dylan Johnson, Connor Taffe, and Brent Blasingame
- Introduced new developers to the fundamentals of Unity and taught how to combine OpenCV and Vuforia to create a more complex Augmented Reality application.
- Combining opencv and vuforia in a single application can allow for post rendering and multiple camera usage.

Skills

Languages: C++, LaTeX, Java, Python, C#

Operating Systems: Linux (Debian, Arch), Windows 7/8/10

Toolkits: Unity3D, OpenGL, Vuforia, Visual Studio, Git

Hardware: HTC Vive, Microsoft Hololens, Oculus Rift, Samsung GearVR, Google Cardboard, CAVEs

Miscellaneous: strong verbal and written communication skills, excellent troubleshooting and debugging skills, exceptional problem solving skills, good teams skills