Jarod Saxberg

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EDUCATION

Indiana University, Bloomington, IN **May 2021**
Bachelor of Science in Intelligent Systems Engineering **Overall GPA: 3.70 / 4.00**
Concentration: *Computer Engineering*
Minor in Mathematics and French

Relevant Coursework
Engineering Computer Architectures
Computer Systems Engineering
Reverse Engineering Embedded Systems

TECHNICAL SKILLS

Programming Languages: Java, Python, C, C#
Spoken Languages: English (native), French (intermediate), Spanish (limited)
Operating Systems: Microsoft Windows, Linux, UNIX
Hardware: HTC Vive, Oculus Rift, Arduino
Miscellaneous: Unity, Steam VR, Visual Studio Code, Eclipse, Photogrammetry, ZBrush, Radare2

EXPERIENCE

Associate Instructor, Indiana University, Bloomington, IN **Aug 2018 – Present**
ENGR-E 101: Engineering Innovation and Design

- Responsible for teaching introductory Python and how it relates to microcontrollers and sensors to students from a wide range of backgrounds.
- Assist the primary instructor with class planning, lab supervision, and development of the course goals and objectives.
- Create assignments that aim to reinforce what the students have learned in class.

Mirror Stage Studio, Bloomington, IN **Aug 2018 – Present**

- Startup focused on integrating virtual reality into archaeology, education, and tourism.
- Use photogrammetry to create three-dimensional models from two-dimensional photos of an object.
- Program the behind-the-scenes utilities that allow users to interact with virtual reality objects and progress through an environment.

Virtual Learning Environment Research, Indiana University, Bloomington, IN **Aug 2017 – Aug 2018**

- Designed a virtual reality environment to explore the potential for virtual reality to be used as a learning tool in education.
- Developed the behind-the-scenes utilities to seamlessly transition between levels and handle user interaction.
- Created a short quiz to test the differences in how a person learns from a virtual reality environment and from a textbook.

Lipid Biophysics Research, Indiana University-Purdue University Indianapolis, IN **May 2016 – Apr 2017**

- Researched the electrical properties of lipid membranes to find real-world applications as an organic material.
- Prepared samples in a lab environment for analysis with small angle x-ray scattering and nuclear magnetic resonance.
- Improved communication skills by writing an academic research paper on the results.

PROJECTS

Virtual Reality Archaeological Toolkit **Nov 2018 – Jan 2019**

- Allows archaeologists to view multiple stratigraphic units of all excavated trenches over past excavation seasons within the context of the whole dig site.
- Designed a measurement tool that enables accurate linear, area, and volumetric measurements.
- Received positive feedback and interest from archaeologists after presenting the toolkit and its features.

Labors of Hercules – VR Experience **Aug 2017 – Aug 2018**

- Designed an environment to depict six of the twelve Labors of Hercules as they were described in a textbook. (Unity)
- Handled the scripting required to process user interaction with the environment. (C#)
- Developed a script which read user-responses from a Google Sheets spreadsheet and sent a follow-up survey after three days. (Google Forms, Google Sheets, Google Scripts)

PRESENTATIONS, PROCEEDINGS, AND PAPERS

Brennan, M., **Saxberg, J.**, Plank, N. (2019). *Virtual Reality and Photogrammetric Techniques at Cosa.* Paper presented at the Archaeological Institute of America's annual meeting in San Diego, CA.

Saxberg, J. (2017). *Exploring the Electrical Properties of Lipid Membranes.* Paper written as a part of receiving the AP Capstone diploma. Available at http://pages.iu.edu/~jsaxberg/papers/.