Wiley Corning

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Education

University of Wisconsin-Madison, Madison, WI
- Computer Science graduate program (September 2020 – present)

New College of Florida, Sarasota, FL
- BA, Mathematics and Computer Science (June 2016)
- Senior Thesis: Topology of Neural Networks.
  - Explored the mathematical properties of neural networks to develop reasoning about the solutions learned through gradient descent.
  - Considered applications of this work to improve robustness.
  - In an experiment involving a small network, detected patterns in the distribution of parameters learned across many distinct training runs.

Work Experience

Three Space Lab, Cambridge, Ma
Cofounder / CTO (January 2019 – August 2020)

- Worked with consultancy clients to develop an understanding of their domain space and identify project requirements
- Designed and implemented interactive software projects and underlying cloud technologies
- Led the development team and helped shape company strategy

MIT Media Lab, Cambridge, MA
Independent Contractor (January 2017 – January 2019)

- Developed over a dozen VR prototypes and applications, broadly focused on new techniques for collaborative education
- Engaged in user testing with students, instructors, and others through demos, workshops and focus groups; enhanced the usability of our projects with insights derived from this process
- Contributed to the design and implementation of experiments in human-computer interaction
- Co-authored papers related to VR system design and experimental results
- Supervised MIT undergraduate student researchers and volunteer contributors

Other Experience

Independent work: Realtime Network System (2019 – 2020)
- Designed API for a framework for building multi-user interactive applications
- Implemented server using .NET Core, deployed to Google Cloud in a Docker container
- Implemented high-level client framework to run in Unity3D or .NET Core
- Wrote numerous system tests
- In work role, developed a fully-functional collaborative VR app using this system

MIT / Harvard / Berklee School of Music, Teaching Assistant.
2.S972: "Designing VR Applications for Learning and Creativity" (Spring 2018)
- Responsible for student labs
- Lectured on topics in software design, VR development and graphics programming

Taught Intro to Unity Development workshops at **2017** and **2019 Reality Virtually Hackathon** and **2020 MIT Reality Hack**

Winner of **Hackers' Choice Award**, MIT Hacking Arts 2017

Selected Projects at MIT Media Lab

CrystalVR, an interactive VR system for viewing a vast database of molecular crystalline structures and exploring their symmetry properties

CocoVerse, a collaborative VR sandbox that allows users to paint and import 3D models in a shared virtual space

ElectroVR, a VR physics lab for teaching and learning electrostatics, featuring rich 3D visualizations and recorded in-VR lectures by MIT instructors

Window, a system to allow outside users to interact with people in VR by using a tablet or smartphone as a bidirectional viewport

CellClouds, a tool for collaboratively exploring and annotating high-resolution 3D biomedical scans

Professional Skills

- Background in mathematics informs approach to problem-solving
- Technical experience with machine learning, graphics programming, and networked systems
- Confident public speaker, comfortable presenting work and providing instruction
- Experience designing user experiences to meet requirements and achieve high usability
- Fluent in software design patterns and best practices

Programming Languages

- Extensive experience with C#, HLSL, JavaScript (ES6), Python, SQL, Java
- Working knowledge of Bash, R, Matlab, C++
- Tools and libraries: ReactiveX, TensorFlow, Protocol Buffers, Jekyll, WebRTC, LaTeX, Git, AWS