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Education

Vanderbilt University **Graduation:** Dec. 2020

B.S. Computer Science, Mathematics, Minor in Scientific Computing **GPA:** 3.75 / 4.00

Relevant Coursework: Data Structures, Intermediate Software Design, Computer Graphics, Image Processing, Discrete Structures, Web Development, Operating Systems, Nonlinear Optimization

Technical Skills: C++ (3 years), Python, C#, Unity, JavaScript, HTML & CSS, React, React Native

Experience

Teaching Assistant / Vanderbilt University School of Engineering **Jan. 2019 – Present**

- Worked as TA for Discrete Structures course (2 semesters) and currently for Operating Systems.
- Hold office hours, answer course-related questions, grade quizzes, homework and exams.

Undergraduate Researcher / Vanderbilt University School of Engineering **Jun. 2019 – Present**

- Researched at Vanderbilt LiVE Lab on AR & VR studies.
- Developed Unity applications to assess human perception in AR through Microsoft HoloLens.
- Currently working on processing and displaying historic stereoscopic images in VR.

Software Engineer / Eddify Co. **Jul. – Aug. 2020**

- Worked as fulltime SWE at Eddify Co., a young startup, on its mobile application named Airsip.
- Pushed the app to its MVP release with the technical team.

Projects

CLI for Image Processing / C and C++ based command line interface **Jan. – May 2019**

- An OpenGL based CLI built from scratch. Its functionalities include:
  - Reading in and displaying TIFF binary files.
  - Manipulating images through discrete convolution filters.
  - Drawing basic geometric shapes on black canvas and changing their 3D transformations.
  - Rendering ray-traced images of 3D geometric shapes with different color & texture properties.
- GitHub repository made private due to Vanderbilt Honor Code Policy.

NaturalScene & NarrowingWalls / Unity C# projects for Microsoft HoloLens **Jun. – Nov. 2019**

- Two separate yet similar projects for assessing human perception abilities in AR.
- Both projects implement a full set of experimental protocol, consist of virtual objects that change behavior on voice commands, interactive buttons and floating text UI to indicate data or status.
- Both projects were supplied to the University of Utah Department of Psychology for testing and are available on GitHub at github.com/VanderbiltLIVELab.
- Paper was submitted to IEEE VR 2020 conference and approved as submission #1318.

Digital Cultural Heritage / Python & Unity project for Oculus VR **Jan. 2020 – Present**

- Ongoing research project aimed to raise public awareness and aid researches on historic stereoscopic images primarily made in mid-19th to 20th cen.
- Convert stereoscopic images to VR-compatible Unity scenes with trained faster R-CNN model.
- A Steam VR version of this project is due for public release in the near future.

Airsip / React Native application for iOS & Android **Jul. – Aug. 2020**

- A forum app aimed to provide first-gen low-income students valuable info on college environments.
- Users are allowed to ask questions in text and receive answers in short videos.
- Worked on user-side input validations, UI adjustments and code refactoring with better libraries.