Spencer Yue

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Education

Bachelor of Science, Computer Engineering Honors, May 2019
The University of Texas at Austin
GPA: 3.83/4.00

Skills

Python, React, JavaScript, MATLAB, C++, CUDA C++, C, Java, CSS, HTML, TensorFlow, Bash

Work Experience

Tietronix Software Inc., *Software Intern (Summer 2018)*

- Designed an ultrasound imaging simulator implementing the Spatial Impulse Response algorithm on the GPU with CUDA.
- Built a Python API with pybind11 to manage GPU memory via PyTorch Tensors.
- Configured build system with CMake, Ninja, and clang++/lld on Windows for fast builds.
- See *https://github.com/spenceryue/OpenBCSim*.

Projects

videomag *(https://github.com/spenceryue/videomag)*

- Built a web application implementing the Eulerian Video Magnification algorithm to visualize small changes from a user's video or web camera.
- Wrote C implementation based on the original authors' research paper and MATLAB code.
- Interfaced with JavaScript to run in browser by compiling to WebAssembly with emscripten.

StudyParty *(https://github.com/spenceryue/chairs)*

- Built a web application in vanilla HTML, JavaScript, and CSS to share one's location on campus with an interactive 3D interface.
- Designed and animated 3D object models using CSS transforms and Sass preprocessing.
- Researched browser rendering process and tested performance of various animation techniques with SVG, JavaScript, and CSS.

Pintos *(private repo, no link)*

- Built the process scheduler, user program support, virtual memory manager, and file system modules of the Pintos operating system in C.
- Debugged multi-threaded programs in GDB.
- Practiced code review, pair programming, and version control (Git).

Courses

Computer Engineering: Operating Systems, Data Science Principles / Lab, Algorithms, Software Design 1 / 2 / Lab, Digital Image & Video Processing, Linear Systems and Signals, Distributed Systems, Intro to Linux, Digital Logic Design

Math: Real Analysis I / II / III, Topology I, Number Theory, Linear Algebra, Discrete Mathematics, Stochastic Processes, Probability I, Differential Equations, Calculus I / II / III

Awards

Silver Medal in Week of Code 36 HackerRank Competition (2018)
Silver Medal in HourRank 25 HackerRank Competition (2018)
Noble Educational Fund Scholarship of $15,000 (2014)
UT Austin Engineering Honors Program, Scholarship of $5,000 (2014)