**Spencer Yue**

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**Education Bachelor of Science, Electrical & Computer Engineering (Honors)**, May 2019

The University of Texas at Austin

GPA: 3.83/4.00

**Courses** Computer Engineering: Operating Systems, Data Science Principles (& Lab), Algorithms,

Software Design (I, II, & Lab), Digital Image/Video Processing, Linear Systems and Signals

Math:Real Analysis I, Number Theory, Linear Algebra, Discrete Mathematics,

Stochastic Processes, Probability I, Differential Equations, Calculus I–III

Online Courses: Parallel Programming (Udacity)†, Web Developer Bootcamp (Udemy)†

**Projects** videomag(<https://github.com/spenceryue/videomag>)

***Summary:*** A web application to reveal nearly imperceptible changes in motion and color from a webcam using the Eulerian Video Magnification algorithm.

***Significance:***First time implementing an algorithm from scientific literature. My largest solo project.

***Tags:***JavaScript, C, WebAssembly, emscripten, CSS, HTML, MATLAB, Image Processing

Pintos (private repository, no link)

***Summary:*** Built components for a simple, educational operating system including the process scheduler, user program support, virtual memory system, and file system.

***Significance:*** My most challenging software experience to date. Learned the ins and outs of a basic operating system. First time writing synchronized code. First time using version control effectively in a team.

***Tags:*** C, GDB, Bash, Make, Multithreading, Git, Systems Programming

Cpp (<https://github.com/spenceryue/Cpp>)

***Summary:***Explored features of C++17 including template metaprogramming, the standard library, best practices/idioms, and various related software development tools. Investigated compiling CUDA C++ with MinGW instead of Visual Studio on Windows. Built Python-like primitives such as *range()* and *zip()* compatible with the standard library.††

***Significance:*** Patched important gaps in my knowledge such as version control (Git) and build systems (CMake). Gained confidence, proficiency, and preference for my current dev. tools.

***Tags:*** C++17, CUDA C++, Git, CMake, Bash, Sublime, MinGW, Windows Linux Subsystem

chairs (<https://github.com/spenceryue/chairs>)

***Summary:*** A collection of 3D models of chairs and tables made with CSS for Study Party web app.

***Significance:*** Built a difficult frontend design from scratch without a library or framework. Recognized some of my teamwork shortcomings including unfamiliarity with Git and the need to adjust my project ambitions and expectations if necessary to match those of my teammates.

***Tags:*** CSS/Sass, SVG, HTML, JavaScript, Front-End Design

**Skills** C99, Python 3, MATLAB, C++17, CUDA C++, CSS, JavaScript, HTML, Java, Bash †††

**Awards** Noble Educational Fund Scholarship of $15,000 (2014)

UT Austin Engineering Honors Program, Scholarship of $5,000 (2014)