**Spencer Yue**

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**Objective** Internship in front-end web development.

**Education *Bachelor of Science, Computer Engineering Honors***, May 2019

The University of Texas at Austin

GPA: 3.84/4.00

**Skills** React, JavaScript, CSS/Sass, Python, TensorFlow, C++/CUDA C++, C, Java, MATLAB, Bash/fish

**Work Experience *Tietronix Software Inc.***, *Software Intern (June 2018 – August 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 faster builds.
* See[*https://github.com/spenceryue/OpenBCSim*](https://github.com/spenceryue/OpenBCSim).

**Projects *Solar******Monitoring Project*** *(*[*https://github.com/santoso-solar-monitoring-project/*](https://github.com/santoso-solar-monitoring-project/)*) (Ongoing)*

* Designing a real-time dashboard web application to monitor solar panels at the UT Engineering Education and Research Center.
* Using React, D3, three.js, TypeScript, Webpack, Storybook, Jest, and Google Firebase.
* Gaining experience in JSON Web Token authentication, React Hooks, and FLIP animation.

***videomag*** *(*[*https://github.com/spenceryue/videomag*](https://github.com/spenceryue/videomag)*) (Fall 2017)*

* Built a web application implementing the Eulerian Video Magnification algorithm to visualize small changes from a video or user’s web camera in real-time.
* 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*](https://github.com/spenceryue/chairs)*) (Spring 2017)*

* + - 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.

**Courses *Computer Engineering:*** Operating Systems, Algorithms,Software Design I/II/Lab, Data Science Principles/Lab, Digital Image & Video Processing, Digital Signal Processing, Linear Systems and Signals, Distributed Systems, Intro to Linux, Digital Logic Design, Senior Design

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

**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)