Benjamin Yang

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Education

The University of Texas at Austin *Austin, TX* — Aug 2015 - May 2019
- Bachelor of Science in Computer Science
- GPA: 3.9

Technical Skills

General:	Proficient in Java, C, Python, Verilog and LaTeX
	Familiar with Bash, Scala, C++, Lisp, x86_64, ppc64
Web Development:	Proficient in JavaScript, HTML, CSS
Data Science:	Proficient in Python (Pandas, NumPy, SciPy)

Personal Projects

Conductor — Jan 2016
- Used JavaScript and Leap Motion, a motion detecting hardware, to develop a web application reminiscent of Guitar Hero, except for directors of orchestras and classical music.

gigAgent — Mar 2016
- Created an web application using MeteorJS that provides a bidding platform and two-sided marketplace for venues/people and bands. Designed to help lesser known bands get gigs without an agent.

Tomasulo Algorithm — May 2016
- Implemented the Tomasulo Algorithm involving out-of-order execution, register renaming, parallelization and pipelining for a subset of PowerPC64 instructions in Verilog.

Experience

Intern at The University of Texas at Austin *Austin, TX* — Jun 2014 - Aug 2014
- Built web applications using Processing for one of the university's computer science courses that explained fundamentals of computer science such as heuristics and regression.

Relevant Coursework

Data Structures — Aug 2015 - Dec 2015
- Implemented graph algorithms: A*, Dijkstra's, Prim's
- Worked with MapReduce on an adaptation of Hadoop

Computer Architecture — Jan 2016 - Jul 2016
- Wrote an interpreter for a programming language with integers, conditionals, loops and functions in C
- Wrote a compiler for x86_64 and PowerPC64 assembly languages in C for the language mentioned above
- Wrote an emulator in C for the PowerPC64 assembly language
- Designed a microprocessor for a subset of PowerPC64 in Verilog

Operating Systems — Aug 2016 - Dec 2016
- Created a shell based on bash
- Implemented a priority scheduling algorithm for concurrent threads, a system call handler, virtual memory with demand paging, and a multilevel indexed file system for PintOS

Programming for Correctness and Performance — Aug 2016 - Dec 2016
- Wrote a micro kernel using vector intrinsics for a high performance matrix-matrix multiplication algorithm