BRANDON QIAO

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EDUCATION

University of Illinois at Urbana-Champaign *Expected May 2020*
B.S. in Computer Engineering *Overall GPA: 3.6*
Engineering James Scholar *Technical GPA: 3.7*

RELEVANT COURSEWORK

Embedded Systems	Computer Security	Computer Systems Engineering
Computer Organization and Design	Digital Signal Processing	Data Structures and Algorithms

WORK EXPERIENCE

J.P. Morgan Chase & Co. June 2019 - August 2019
Software Engineering Intern *Jersey City, NJ*

- Developed a machine learning model to detect production server anomalies
- Created a Kafka data ingestion scheme to receive, parse, and send server logs to model
- Utilized Bootstrap and Flask to create a real-time monitoring dashboard

Arity, a subsidiary of Allstate Insurance August 2018 - December 2018
Embedded Engineering Intern *Chicago, IL*

- Collaborated with the sensors team to develop and maintain automotive data-collection hardware
- Developed simulations to ensure reliability of Arity developed hardware and software backends
- Wrote and executed Python test scripts for prototypes and Allstate Drivewise production units
- Communicated with hardware suppliers to coordinate testing and ascertain product specifications

National Center for Supercomputing Applications June 2018 - July 2018
Undergraduate Research Intern *Urbana, IL*

- Contributed to the open source volumetric data analysis and visualization tool yt
- Developed a ray-tracing volume renderer for large Smoothed-Particle Hydrodynamics datasets
- Ported Python code to C with Cython, giving certain programs a fiftyfold increase in speed
- Wrote tests to ensure the reliability and stability of code to be integrated into yt

PROJECTS

Unix-based OS May 2018

- Worked on a team of four to develop a Unix-inspired OS from scratch for Systems Engineering (ECE391)
- OS featured virtual memory, system calls, device drivers, read-only filesystem, and multitasking/scheduling
- Team was required to work closely, communicate effectively, and properly use version control
- Personally responsible for keyboard/terminal drivers, implementation of syscalls, and multiple terminals

TECHNICAL STRENGTHS

Computer Languages	C, C++, Python, Verilog, x86 Assembly
Hardware Platforms	FPGA, Arduino, Raspberry Pi
Tools	Git, SVN, LaTeX