Hankun Zhao

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Education

B.S. Electrical Engineering and Computer Science **Grad 2019**
University of California, Berkeley **GPA: 4.00**
Dean's Honors, Edward Frank Kraft Award recipient, Tau Beta Pi, Eta Kappa Nu

Experience

Undergraduate Researcher - Berkeley AUTOLab September 2017 - Present

- Developing a simulation framework for autonomous driving experiments
- Developing multiagent search algorithm for learning and simulating traffic and pedestrian behavior
- Using Python, OpenAI, Tensorflow, Keras

Undergraduate Researcher - The ASPIRE Lab August 2016 - Present

- Developed efficient convolution algorithm for the Hwacha vector processor
- Exploring design space of vector processors, and evaluating ability to tune the Hwacha architecture for machine learning algorithms
- Using C, Assembly, Chisel HDL

Performance Infrastructure Intern - NVIDIA May 2017 - August 2017

- Developed tool for profiling and monitoring workloads of distributed GPU clusters
- Tool is integral to performance, architecture, and software teams
- Used C++, CUDA

CS61A Tutor - Berkeley Computer Science Dept. September 2016 - May 2017

- Provided small-group tutoring to students in UC Berkeley's introduction to computer science course.
- Assisted in grading, exam proctoring, Q&A, office hours

Research and Development Intern - Sandia National Laboratories June 2016 - August 2016

- Performed cybersecurity research to support the development of metrics for cybersecurity risk analysis.

Research Apprentice - Berkeley Institute for Data Science January 2016 - May 2016

- Developed VISCM, a tool that constructs perceptually uniform colormaps for data visualization

Miscellaneous Projects

Simulated Explosions with Incompressible Fluids Spring 2017

- Implemented a fluid dynamics and particle model for 2D explosion simulation
- Used C++, OpenGL, and OpenMP

Optimized Non-Maximum Suppression for Image Recognition Fall 2016

- Optimized a serial implementation of the NMS algorithm for GPUs to support research in computer vision
- Used C++, OpenCL, and OpenMP

Proficiencies

Languages:	Assembly, C, C++, Java, Python, Perl, Verilog, Chisel
Tools/OS:	Unix, Windows, GNU toolchain, Visual Studio, Git, Perforce, Continuous integration, LaTeX
Skills:	Multithreaded programming, distributed systems, machine learning, computer graphics
Interests:	Computer architecture, deep learning algorithms, autonomous machines, high performance computing

Selected Coursework

EE126	Engineering Probability and Statistics
EECS151A	Digital Design and Integrated Circuits
EECS151LA	ASIC Design Laboratory
CS162	Operating Systems
CS170	Algorithms
CS184	Computer Graphics
CS188	Artificial Intelligence
CS189	Statistical Machine Learning
CS194-15	Engineering Parallel Software