Benjamin Schreiber

(847) 707-0084

bjschre2@illinois.edu

123 South Dunton Avenue, Arlington Heights, IL 60005

Education

GPA 3.94/4.00

University of Illinois Urbana-Champaign

Bachelor of Science, Computer Engineering — May 2019

Relevant Coursework:

- CS 225 - Data Structures - A
- ECE 391 - Operating Systems - A+
- ECE 411 - Computer Organization and Design - A

Rolling Meadows High School - Rolling Meadows, Illinois — May 2015

Work Experience

Nvidia — Compiler Intern - Summer 2017

- Interned on CPU team in dynamic binary translation group
- Contributed to firmware that dynamically recompiles frequently executed code
- Wrote and refactored compiler optimizations in large C99 codebase
- Optimized cryptographic operations and integer division
- Verified optimizations with internal framework using ARM assembly and Python scripts

University of Illinois Urbana-Champaign — Course Assistant - Spring 2017

- Aided students with TTL and System Verilog based labs
- Helped bridge conceptual gap from programming to designing digital systems
- Held multiple open lab sessions per week

Research Experience

Research Group of Professor Rakesh Kumar — Researcher - 2016-2017

- Implemented C-Pack cache line compression algorithm in C++
- Conducted performance analysis of algorithm

Promoting Undergraduate Research in Engineering (PURE) — Researcher - Spring 2016

- Mentored by graduate student in research project on cache memory
- Increased hit rate in L2 through strategy based on critical words

Involvement and Leadership

PURE Committee — Public Relations Chair 2017-2018; Logistics Coordinator 2016-2017

- Managed public relations for organization created to empower freshmen to do research

Digital Systems Lab — Final Project - Fall 2016

- Extended a provided RISC ISA with display output and image processing instructions
- Synthesized logic in System Verilog and deployed to FPGA board
- Utilized parallelized computation units, RAM banking, and VGA protocol

FIRST Robotics Team — Member - 2011-2015

- Developed programs in C for Arduino based embedded systems
- Collaborated with peers and professional engineer mentors to solve design issues
- Independently developed system to measure and log multiple temperature inputs on robot

Awards and Recognition

National Merit Scholar
James Scholar
Campus Honors Program
Best Presentation Award - PURE Symposium

Skills

C/C++
Python
SystemVerilog
Assembly