DAVID HASHE

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EDUCATION

Carnegie Mellon University, Pittsburgh, PA **May 2020**
B.S. Computer Science
Unweighted GPA: **4.00**
Advanced coursework: 15-213 Computer Systems, 15-251 Great Theoretical Ideas in Computer Science, 15-150 Functional Programming, 36-225 Probability Theory, 36-226 Statistical Inference

University of North Texas, Texas Academy of Mathematics and Science, Denton, TX **May 2016**
Unweighted GPA: **4.00**
Advanced coursework: Computer Architecture, Compilers, Systems Programming, Assembly Language and Computer Organization, Vector and Multi-variable Calculus, Differential Equations I, Linear Algebra

WORK EXPERIENCE

Advanced Micro Devices (AMD) Research, Austin, TX **May-August 2016**
Co-op Engineer
- Enhanced the gem5 cycle-accurate computer architecture simulator KVM virtualization support to include simulations using detailed cache and processor models (C++ and Python)
- Diagnosed and solved complicated race conditions introduced during multithreading of gem5

Computer Systems Research Laboratory, University of North Texas, Denton,TX **Sep 2014-May 2016**
Undergraduate Researcher
- Extended trace-driven function-level cache simulator to handle multilevel split caches
- Investigated the efficiency of GPU and RISC CPU co-processors for processing-in-memory

Advanced Micro Devices (AMD) Research, Austin, TX **June-August 2015**
Co-op Engineer
- Extended the gem5 simulator to allow using multiple instances of the Ruby memory system
- Improved reproducibility of experiments by developing file access redirection system for gem5

LEADERSHIP AND VOLUNTEERING

Plaid Parliament of Pwning (PPP) **September 2016-Present**
Member
- Problem writer for PicoCTF, an outreach event to teach computer security to high school students
- Focus on reverse engineering problems in competitions

SCS4ALL **November 2016-Present**
Member, Social team
- Problem writer and grader for SCS4ALL trivia night

GNU Guix Package Manager **February-November 2015**
Volunteer Contributor
- Packaged 10 GNOME core applications, Freedesktop.org libraries, and Cisco libraries
- Worked on Open Source software with multinational team

TECHNICAL SKILLS

C/C++	Ubuntu	x86 Asm	Mercurial	Autotools
Python	Scheme	MIPS Asm	gdb	CMake
R	SML	Git	LaTeX	Scons

HONORS AND AWARDS

CMU SCS Dean's List	**2016, 2017**	Intel STS Student Initiative Award	**2016**
Google Games Pittsburgh, 3rd Place	**2017**	Intel STS Research Report Award	**2016**
CMU Tartan Data Science Cup, 2nd Place	**2016**	FIRST Tech Challenge Worlds	**2015, 2016**
United States Presidential Scholars Candidate	**2016**	FIRST Robotics Competition Worlds	**2015**
Eagle Scout, Gold Palm	**2016**	USA Computing Olympiad Gold Division	**2015**