Zachary Marcus

zacharyjmarcus@gmail.com | https://zacharymarcus.xyz | 704.763.5707

Available for computer engineering intern positions for January - August 2018

EDUCATION

NORTHEASTERN UNIVERSITY
BS in Computer Engineering and Computer Science
Expected May 2019 | Boston, MA
College of Engineering
GPA: 3.8 / 4.0

SKILLS

LANGUAGES
C++ • Python • Java • C
MIPS assembly • SystemVerilog
JavaScript • HTML • CSS

PROFESSIONAL
Git • SVN • Perforce • Jira
Working proficiency in Spanish

COURSEWORK

High Performance Computing
Object Oriented Design
Computer Systems
Networks and Distributed Systems
Algorithms and Data
Embedded Design: Enabling Robotics
Logic and Computation
Fundamentals of Computer Science I & II
Digital Logic Design
Circuits and Signals

HONORS AND AWARDS

Dean's List
National Merit Scholar Award
NEU Hardware Hackathon Winner
MakeBU 2015 Hackathon Winner

ACTIVITIES

IEEE Webmaster
AIAA - Planetary Lander
Northeastern Honors Program
NUHacks
Civic Engagement Program
Generation Citizen

LINKS

Github: ZachMarcus
LinkedIn: zacharyjmarcus

TECHNICAL EXPERIENCE

MIT LINCOLN LABORATORY | Software Coop Engineer
January 2017 - Present | Boston, MA
- Write and evaluate large scale parallel applications
- Analyze performance bottlenecks and optimize data analysis tasks
- Develop mission-critical software in C++ for use in signal processing
- Leverage and contribute to several communication libraries and open standards

ADVANCED MICRO DEVICES (AMD) | Software Coop Engineer
January 2016 - August 2016 | Boston, MA
- Designed a tool to simplify driver performance analysis: dynamic analysis of applications and workflow-friendly command line tool
- Communicated with hardware and performance engineers to determine appropriate performance metrics for applications
- Developed scripts to test modifications to the shader compiler
- Wrote and modified test cases to match specifications
- Enhanced team infrastructure and tools
- Analyzed bugs in compiler caused by shaders and determined sources of bugs

ENERDYNE POWER SYSTEMS | Engineering Intern
May 2013 - August 2014 | Charlotte, NC
- Modified database of methane gas well readings spanning two decades
- Created diagrams and other visuals for project proposals and documentation
- Executed pipeline plans in active landfills

RESEARCH EXPERIENCE

SUPERCOMPUTING (2015-2017) | Student Cluster Engineer
July 2015 - Present | Boston, MA
- Preparing for the another competition in Germany this June
- Learning about high performance hardware and optimizing the configurations for applications (e.g. High Performance Linpack) on experimental systems
- Competed on a team in the International Conference for High Performance Computing 2015; attending again as a technical lead in 2016

NORTHEASTERN UNIVERSITY COMPUTER ARCHITECTURE RESEARCH LAB | Undergraduate Research Assistant
May 2015 - May 2016 | Boston, MA
- Developed Android application and executables for side channel analysis of mobile device Graphics Processing Units (GPUs)
- Expanded Android application for simplified GPU benchmarking, porting a benchmark suite designed for heterogeneous computing architectures

VOLUNTEER EXPERIENCE

GENERATION CITIZEN | Democracy Coach / Cohort Leader
September 2014 – January 2016 | Boston, MA
- Advised on how to best deliver an action civics education to students
- Communicated with students and community partners to determine solutions to community problems