Derek Rodriguez

Website: http://dwrodri.blog
Github : https://github.com/dwrodri
rodriguez.der@husky.neu.edu
(803) 331-8308

EDUCATION

Northeastern University (NU) **Sept '19 - Present**
Ph.D. in Computer Engineering
Selected Courses: Computer Architecture, High Performance Computing, Systems Security, Applied Probability & Stochastic Processes
Awards: NSF STARS Fellowship

Clemson University (CU) **Sept '15 - May '19**
B.Sc. in Computer Science
Selected Courses: Applied Data Science, Linear Algebra, Technical Writing, 2D Game Engine Construction, Deep Learning, Theory of Probability
Awards: Best Undergrad Research, Presidential Scholarship, CU STEM Scholarship, LSCAMP Book Award

EXPERIENCE

NU Computer Architecture Lab **Sept '19 - Present**
Research Assistant
Developing simulation-driven tool for automated side channel detection in multicore processors.

Georgia Tech Research Institute **May '18 - July '18**
SURE Program Intern
Designed and implemented visualizations for multi-petabyte-sized dataset of malware programs for B2B web service.

CU Scalable Computing Analytics Lab **Sept '17 - Sept '19**
Undergraduate Research Assistant
Implemented novel technique for predicting memory accesses in GPU applications using convolutional neural networks.

PROJECTS

LQTLD: Linear Quadtree with Level Differences
Improved memory usage by 98% in self-driving robot by implementing novel data structure published in *Constant Time Neighbor Finding in Quadtrees* by Aizawa et al.

Perceptron: Deep Learning Server for CU School of Computing
Curated and deployed software stack allowing disjoint research teams at CU to train models on shared hardware without software dependency issues.

Music Theory Visualization Tool for Guitarists
Won hackathon by building music visualization software for guitarists using Python, C++11, and SDL2.

PUBLICATIONS

Learning Page Access Patterns for GPU UVM **SC19 Poster**
Bennet W. Cooper, Derek Rodriguez, Tyler Allen

Maximizing Throughput on Power-Bounded HPC Systems **IEEE CLUSTER**
Pengfei Zou, Derek Rodriguez, Rong Ge