Derek Rodriguez

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EDUCATION

Northeastern University (NU)

Ph.D. Student in Computer Engineering   *September 2019 - Present*

- **Awards:** NSF STARS Fellow
- **Research Interests:** Computer Architecture, Security, Machine Learning

Clemson University (CU)

B.Sc. in Computer Science   *August 2015 - May 2019*

- **Awards:** Palmetto Fellows Scholarship, Presidential Scholarship, School of Computing's Best Undergraduate Research Project
- **Notable Coursework:** Data Science, Technical Writing, Operating Systems, Computer Systems Organization, Computational Intelligence, Theory of Probability, Multivariable Calculus

EXPERIENCE

CU Scalable Computing and Analytics Laboratory (SCALAB)

Research Assistant   *May 2017 - May 2019*

- Won Best Undergraduate Research Project in CU School of Computing for forecasting GPU memory access patterns with neural networks.
- Co-authored *Maximizing Throughput on Power-Bounded HPC Systems*, published in IEEE CLUSTER 2018.

Georgia Tech Research Institute, CIPHER Lab

SURE Program Intern   *May 2018 - July 2018*

- Designed visualizations of malware network activity for Apiary
- Augmented functionality of Apiary, by implementing visualizations designs using Plotly
- Produced poster and presentation for SURE research symposium

TECHNICAL PROFICIENCY

- **Languages:** Python, C, C++, Bash, Assembly (x86/RISC-V), Go, LaTeX, HTML/CSS
- **Tools:** Tableau, Git, CMake
- **Platforms:** Linux, macOS

PROJECTS

Directed Independent Study: Deep Learning   *December 2018*
- Optimized ETL pipeline for noise-cancelling convolutional neural network.

Senior Capstone Design Project: Perceptron Server   *May 2018*
- Curated and Implemented NVDocker-based stack for executing deep learning workloads at CU School of Computing.

Linear Quad Trees with Level Differences (LQTLD)   *October 2017*
- Python implementation of *A Constant-Time Algorithm for Finding Neighbors in Quadtrees* (2009) by Aizawa and Tanaka
- Optimized map storage by >90% and optimized map cell retrieval from $O(n^2)$ to $O(1)$

References provided upon request