Chapel Hill, NC

Education

University of North Carolina at Chapel Hill

M.S. in Computer Science

Aug. 2013 - Aug. 2016

University of North Carolina at Chapel Hill

B.S. in Computer Science

Chapel Hill, NC Aug. 2009 – May 2013

Experience

Microsoft Seattle, WA

Software Engineer

Dec. 2017 – Present

- Ensure public SLA for the Azure Storage Resource Provider service (Control plane for all storage offerings)
- Develop and maintain mission critical Migration Scheduler and other georeplication codebases
- Serve as a security advocate for secure development practices and monitoring

Self-Employed RTP, NC

Solutions Architect and Instructor

Jan. 2017 - Nov. 2017

- Subcontracted as a solutions architect for RedHat to deploy, adminster and develop atop of various offerings from their software catalog including OpenShift, Ansible Tower and JBoss middleware
- Teaching Google's Data Engineering courseware as a Google Cloud Platform Authorized Trainer
- Development of bespoke VR experiences

 $\operatorname{Net}\operatorname{App}$ RTP, NC

Software Engineer

Apr. 2015 - Jan. 2017

- Upstream API design and coding for Cinder (Block Storage) and Manila (Shared Filesystems)
- Integrated NetApp hardware platforms into aforementioned OpenStack projects
- Deployed and maintained internal CI/CD pipeline integrating NFS, iSCSI, and Fibre Channel systems

UNC-Chapel Hill

Chapel Hill, NC

Researcher and Teaching Assistant

Aug. 2013 - Jul. 2015

- Design of novel camera sensor, SPICE modeling of selected image sensor components, and behavioral synthesis
 of sensor network
- Analysis of expected performance and establishment of worst case noise bounds

SpaceX Hawthorne, CA

Security Engineer Intern

May 2014 - Aug. 2014

- Emulation of commercial grade network processing units using GPUs
- Custom design of servers for real-time, in-line processing of very high bandwidth traffic

NVIDIA Corporation

Santa Clara, CA

Tegra Security Intern

May 2013 - Aug. 2013

- Digital architecture work to add Elliptic Curve Cryptography functionality to a dedicated coprocessor
- Investigation into mitigating differential power analysis side-channel attacks

GAMMA Group

Chapel Hill, NC

Collaborator and Developer

Aug. 2012 - Dec. 2012

- Assisted in development of a multi-touch-enabled Android application that simulates virtual percussive instruments in real-time using physically-based sound synthesis
- General research into interactive sound propagation using geometric and numerical methods

National Security Agency

Fort Meade, MD

Cryptologic Access Intern

May 2012 - Aug. 2012

- Developed custom analytics for large scale data processing
- Employed MapReduce techniques for optimal parallelization
- Produced critical workflows that queried disparate databases by automating the generation of complex selectors

Skills

Software: Azure, Google Cloud Platform, Kubernetes, OpenStack, AWS, TensorFlow, Hadoop, CUDA, OpenMP, OpenGL, Wireshark, Nmap, LLVM&GCC, JVM, Xen, ROS, Xilinx Vivado, LTSpice, kiCAD

Hobbies

- $\bullet\,$ Software-Defined Radio
- Analog and Digital IC hacking
- Racing