Michael Rooney

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Education

- **University of North Carolina at Chapel Hill** — Chapel Hill, NC
  M.S. in Computer Science — *Aug. 2013 – Aug. 2016*
- **University of North Carolina at Chapel Hill** — Chapel Hill, NC
  B.S. in Computer Science — *Aug. 2009 – May 2013*

Experience

- **Microsoft** — Seattle, WA
  Software Engineer — *Dec. 2017 – Present*
  - Starting on the Azure Storage team
- **Self-Employed** — RTP, NC
  Solutions Architect and Instructor — *Jan. 2017 – Nov. 2017*
  - Teaching Google's Data Engineering courseware as a Google Cloud Platform Authorized Trainer
  - Subcontracting for RedHat to deploy, adminster and develop atop of various offerings from their software catalog including OpenShift, Ansible Tower and JBoss middleware
  - Development of bespoke VR experiences
- **NetApp** — RTP, NC
  Software Engineer — *Apr. 2015 – Jan. 2017*
  - Upstream API design and coding for Cinder (Block Storage as a Service) and Manila (Shared Filesystems as a Service) OpenStack projects
  - 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*
  - Initial architecture of camera sensor
  - Analysis of expected performance and establishment of worst case noise bounds
  - Behavioral synthesis of sensor network
  - SPICE modeling of selected image sensor components
- **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 sidechannel 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

Languages: Python, C-style C++, Erlang, Javascript/HTML5/CSS3, Assembly (x86,MIPS,ARM), Verilog, LaTeX

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

Hobbies

- Software-Defined Radio
- Analog and Digital IC hacking
- All Varieties of Cycling