



Education

Drexel University

Philadelphia, PA

Bachelor of Science Candidate in Computer Engineering

Anticipated Graduation — June 2013

Bachelor of Science Candidate in Electrical Engineering, Electronics

Minor in Computer Science

Cumulative GPA: 3.58 | In Major: 3.63

Experience

Sep '12 – Jun '13

Senior Design Project in Philadelphia, PA

Embedded System Designer & Programmer

- Design, test, and deploy a waterproof ammeter with non-volatile storage
- Responsible for microcontroller, real-time clock, storage, and USB interface to client software
- Implement USB mass-storage device class with 16-bit microcontroller
- Provide software design support for desktop client application
- Select appropriate parts and associated embedded circuit portions

Apr – Sep '12

Lockheed Martin MS2 in Moorestown, NJ

Coop Technical Senior — Information Assurance (IA)

- Scanned mission-critical systems for vulnerabilities with automated and manual tools
- Hardened mission-critical systems by applying updates and patches
- Researched new scanning software to comply with changing DoD standards requirements
- Wrote Excel plugin to format data for vulnerability database system
- Coordinated with senior engineers and senior executives for weekly status updates
- Created departmental wiki for tool documentation and usage tips

Mar – Sep '11

Lockheed Martin MS2 in Moorestown, NJ

Coop Technical Senior — Computer Infrastructure Integration & Testing (CIIT)

- Wrote Bash scripts to expedite deployment and integration processes
- Developed, tested, and documented backup procedures for servers, diskless & iSCSI disk-based nodes
- Worked alongside Sr. Engineers to develop Cisco IOS applet that monitors mission-critical CF cards
- Wrote VBA script to categorize 4000+ pieces of equipment for proposal
- Refreshed firmware update procedure deployed to soldiers and used on 100+ systems within LM
- All work used on US Government Secret classified systems

Mar – Sep '10

ACIN (Applied Communications and Information Networking) in Camden, NJ

Researcher, Directed by Dr. William Regli and Jeff Salvage

- Configured and tested four-node homogeneous networking testbed
- Established stable multi-node MANET with WPA2-Preshared Key and IPSec encryption
- Contributed to VoIP plugin for C2MINCS¹ Situational Awareness software
- Configured several networks for the 2010 C4ISR² OTM (On the Move) excursion in Ft. Dix, NJ
- Completed performance testing for commercial 802.11g wireless adapters and military SRW³ JTRS⁴
- Represented ACIN at the 2010 Team C4ISR Symposium and Expo in Baltimore, MD
- Communicated directly with project sponsors from US defense contractor CERDEC

Jul '09 – Mar '10

GICL (Geometric and Intelligent Computing Lab) in Philadelphia, PA

Lab Assistant, Directed by Dr. William Regli

- Part of team that built and populated Engineering Format Registry
- Designed and coordinated CD production for 2009 SIAM⁵/ACM⁶ joint conference
- Set up sandbox server with extended MediaWiki installation
- Created custom “Semantic Infobox” template using Semantic MediaWiki
- Utilized SUMO⁷ and UNSPSC⁸ ontologies in a Semantic Template
- Organized and inventoried journal publications, computer parts, and other hardware

¹Command and Control Mobile Intelligent Net-centric Computer System²Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance³Soldier Radio Waveform⁴Joint Tactical Radio System⁵Society for Industrial and Applied Mathematics⁶Association for Computing Machinery⁷Suggested Upper Merged Ontology⁸United Nations Standard Products and Services Code



Honors and Awards

Android app “Textspansion” — **5900+ Downloads**
“Best Text Expansion App for Android” — Lifehacker.com
Dean’s List (5x)
A.J. Drexel Scholarship Recipient
National Society of Collegiate Scholars Member

Projects

Notman — Linux D-Bus notification manager in Python & PyGTK
Proof-of-concept complete, under sporadic development
Textspansion — Text expansion for Android devices
Released June 2011, development on hold
Boot2Gecko — Explored port to HTC Ace (Desire HD/Inspire 4G)
OS built but won’t boot — init.rc is incorrect
YADA (“Yet Another Dropbox App”) — Hash-based client/server file sync in C
Completed for school assignment, development ceased
MetronOSH — Arduino-based Open Source Hardware metronome (similar to Boss DB-88)
Submitted to 2011 Open Hardware Summit scholarship contest, on indefinite hold
RADuation Cap — 8x8 RGB LED array on graduation cap
In initial design phase, to be used in June 2013

Skills

Languages

- C
- Java
- L^AT_EX
- Bash & Zsh
- Python
- Perl (a bit rusty)

Protocols

- HTTP
- Mobile Ad-Hoc Networking
- Multicast
- TCP/IP
- UDP
- USB Mass Storage
- WPA & WPA2

Software & Toolkits

- Linux CLI Toolchain
- Vim
- Git, Mercurial, Subversion
- Android SDK
- Arduino
- NVIDIA CUDA
- Wireshark
- GNU Make

Operating Systems

- Linux (Arch, RHEL, Ubuntu, Debian)
- Unix (Solaris 9)
- Mac OS (10.5, 10.6)
- Windows (95+)