



## 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 &amp; 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 &amp; 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 C2MINCS<sup>1</sup> Situational Awareness software
- Configured several networks for the 2010 C4ISR<sup>2</sup> OTM (On the Move) excursion in Ft. Dix, NJ
- Completed performance testing for commercial 802.11g wireless adapters and military SRW<sup>3</sup> JTRS<sup>4</sup>
- 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 SIAM<sup>5</sup>/ACM<sup>6</sup> joint conference
- Set up sandbox server with extended MediaWiki installation
- Created custom “Semantic Infobox” template using Semantic MediaWiki
- Utilized SUMO<sup>7</sup> and UNSPSC<sup>8</sup> ontologies in a Semantic Template
- Organized and inventoried journal publications, computer parts, and other hardware

<sup>1</sup>Command and Control Mobile Intelligent Net-centric Computer System<sup>2</sup>Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance<sup>3</sup>Soldier Radio Waveform<sup>4</sup>Joint Tactical Radio System<sup>5</sup>Society for Industrial and Applied Mathematics<sup>6</sup>Association for Computing Machinery<sup>7</sup>Suggested Upper Merged Ontology<sup>8</sup>United Nations Standard Products and Services Code



## Honors and Awards

Android app “Textspansion” — **5400+ 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<sup>A</sup>T<sub>E</sub>X
- 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+)