Sean Barag

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http://github.com/sjbarag <>

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

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

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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
- LaTeX
- Bash & Zsh
- Python
- Perl (a bit rusty)

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

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

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