William J. Chen

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EDUCATION

Bachelor of Science in **Computer Engineering**, Class of 2018

Honors: Dean's Scholarship GPA: 3.0

Course Highlights: Engineering Computation++ (**Python**), Intro to Software Engineering (**C/C++**), Electric Circuits, Intro to Engineering Design, Intro to Logic Design, Signals and Systems, Probability Theory in ECE

Public Speaking Course, Saint Anselm College, Manchester, NH May – June 2015

Boston University Study Abroad, Technische Universität Dresden, Dresden, Germany Feb – July 2016

Additional Languages: Native in Mandarin Chinese (speaking); fluent in Spanish and German; elementary in French

TECHNICAL SKILLS

Programming Languages: C/C++, Python, Unix Shell, LaTeX. **Basic**: C#, Assembly, MATLAB, PHP, SQL

Technologies: Microsoft Active Directory, BIND DNS, **IPSec** VPNs, AAA (Authentication, Authorization, Accounting) services, Network segmentation and policing, **IPv6** deployment, Linux Containers (**LXC**), **Docker**, Z File System (**ZFS**), **iSCSI**

Hardware: Breadboarding, Soldering, Oscilloscopes, Voltimeters, Computer and smartphone/embedded systems repairs

Operating Systems Experience: Linux (distros: Gentoo, Arch, Debian and its derivatives, CentOS/Fedora, Kali Linux), Mac OS X, Microsoft Windows, pfSense (FreeBSD)

AREAS OF INTEREST

Cybersecurity, Network Performance, High Availability - I am interested in systems deployment and penetration testing of reliable, robust, and secure Internet infrastructure, overseeing technologies such as DNS, SELinux policies, containers/virtualization (OpenStack, VMware ESXi). I am also interested in cluster/grid/cloud computing and storage area networks (SANs).

WORK EXPERIENCE

HawkNet Summer Consultant, Saint Anselm College, Manchester, NH Jun – Aug 2015

Involved in deployment operations for the college's Computer Replacement Program; created and deployed Microsoft Windows images, and wrote automated installation scripts combined with the Sysprep utility.

PROJECTS/RESEARCH

Select code available at github.com/thewilliamchen

Kinect Four – Created a Connect Four game that could be manipulated with a Natural User Interface using the Kinect v2 sensor for Windows. Written in C# for Introduction to Engineering course. **Currently recognized for demo** in the Photonics Center.

Elliptic Curve Cryptography – A proof-of-concept implementation of elliptic curve cryptography, built from the ground up without the OpenSSL library. It was written in Python for the Engineering Computation++ course project. Responsible for frontend development, wrote a GUI using Tkinter that encoded and decoded simple text.

Baby Incubator Design – Conceptualized, designed, and prototyped a low-cost (~$400) baby incubator intended for use in developing nations as part of a multidisciplinary group of four. Wrote **Arduino** code controlling heating and air circulation elements.

Gutzkowstraße Network – Discovered several loopholes in a Studentenwerk residence hall circumventing a 7-day 21GiB data cap while studying abroad; wrote Python and shell scripts that automated network access, policy routing, and VPN tunneling.

LEADERSHIP

Boston University College of Engineering, Boston, MA 2015 – present

Dean's Host – Professionally represent the College of Engineering to prospective students and families. Participated in weekly Open Houses in April 2015 to engage BU acceptees and their parents.

Boston University Rocket Propulsion Group (BURPG), Boston, MA 2015 – present

Avionic Systems – Developing software that powers BURPG's custom PCBs, focusing on the ChibiOS Real-Time Operating System (RTOS).

Team Support Technologies – Manage rackmount server and desktop hardware through the **Proxmox** virtualization platform; Deploy **KVM** virtual machines and **LXC** containers that perform simulations for BURPG; Maintain data integrity with offsite backups and **RAID over ZFS**; Provide central file-level storage access with **SMB/CIFS** shares and block-level **iSCSI** targets for bare-metal OS booting.