William Zhang

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github.com/willzhang05

Education

2018–2021 **University of Virginia**, B.S., Double Major in Computer Science and Computer Engineering.
Completed: Digital Logic Design, Program & Data Representation, Discrete Mathematics, Multivariable Calculus, Linear Algebra
Current: Algorithms, Intro to Embedded Systems, Intro to Cybersecurity, Fundamentals of Electrical Engineering, Ordinary Differential Equations

Skills

Programming	Python, C++, Shell, Go, C, Rust, Java	Web	HTML, CSS, JavaScript, Flask, Django
Misc.	Libvirt, Nginx, Kerberos, Ansible, SLURM	Systems	Linux, FreeBSD, Cisco IOS, Juniper Junos

Projects

2019 **GenesisII Log Monitor**, *Distributed Systems Research Group*, github.com/willzhang05/genii-log-monitor.
Program written to monitor Globally Federated File System (GFFS) GenesisII containers. Used opportunity to learn the Rust programming language.

2019 **KLS Motor Controller Library**, *UVA Solar Car*, github.com/solarcaratuva/KLS.
Wrote an Arduino library for interfacing a Teensy 3.6 microcontroller with KLS motor controllers over a CAN bus.

2018 **Public AMT Relay**, *TJHSST Senior Research Project*, github.com/willzhang05/senior-research.
Deployed the first known public Automatic Multicast Tunneling (AMT) relay on the Multicast backbone (MBONE). Initial component of the Multicast to the Grandma (MTTG) project, presented at IETF 101 in MBONED-PIM.

2018 **TapIn**, *HackTJ 2018*, devpost.com/software/tapin-r8uv1s.
Worked with three other students on a concept application that utilized Mifare Classic NFC cards to authenticate to a Django backend. Won prize for Best Web App.

2017 **Bypassing Mac EFI Firmware Password**, cs.virginia.edu/~wyz3sp/mac-efi-firmware.html.
Worked on an independent project to bypass a EFI firmware password lock on an Apple MacBook Pro by reflashing the EFI ROM chip on the logic board.

Experience

2018–Present **Electrical Team Co-director - Embedded Systems Lead**, *UVA Solar Car*, Charlottesville, VA.
Lead development of embedded software and hardware for the various car subsystems.

2018–Present **Distributed Systems Intern**, *Lancium LLC*, Houston, TX.
Help deploy and manage HPC clusters and computing infrastructure using shell scripts, Ansible, and SLURM.

2018–Present **Distributed Systems Research Assistant**, *UVA Department of Computer Science*, Charlottesville, VA.
Assist Dr. Andrew Grimshaw in developing the Campus Compute Cooperative (CCC) and tools for the GenesisII grid computing platform. Developed tools for modified job submission to SLURM.

2019 **Discrete Mathematics Teaching Assistant**, *UVA Department of Computer Science*, Charlottesville, VA.
Worked with Dr. Kevin Sullivan and eleven other undergraduate teaching assistants to hold office hours, answer student questions, and grade exams and homework for CS 2102.

2018–2019 **Systems Engineer Intern**, *UVA Department of Computer Science*, Charlottesville, VA.
Supported departmental research through Unix systems and resource management.

2018 **Network Engineer Intern**, *Cypress Consulting*, Arlington, VA.
Developed tools for Juniper Junos automation using lxml, Juniper pyEZ, vMX, vSRX, and KVM/QEMU.

2016–2018 **Student Systems Administrator**, *Thomas Jefferson HS for Science and Technology*, Alexandria, VA.
Managed school's mission-critical Linux systems and networking in the TJCSL (Computer Systems Lab) with a team of other student sysadmins.
- Led design and deployment of configuration management with Ansible
- Assisted in completely restructuring virtualization infrastructure
- Rebuilt HPC cluster management with SLURM

Languages

English	**Native**
Chinese	**Native speaking proficiency**
German	**B2 proficiency, 5 years experience**