

Jacob Holtom

ELECTRICAL ENGINEER · SYSTEMS ADMINISTRATOR

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Summary

I'm interested in space, radio communications and anything involving electricity. I also work on cars and build (occasionally) fast ones. I love to fix whatever people hand me. I began my professional life as a programmer and systems administrator and then moved on to engineering.

Work Experience

BYU Spacecraft Group

LEAD COMMUNICATIONS ENGINEER

Provo, Utah

Apr. 2016 - PRESENT

- Twin satellites will fly in early 2018
- Design an end-to-end satellite communications system within technical constraints.
- RF engineering work designing antennas and amplifier systems.
- Developed Linux Address Family on-board satellite to support end to end communications
- Developed Ground Station system using an Ettus USRP and GNURadio
- Developed dishes and on-board antenna systems

BYU Computer Aided Engineering Design and Manufacturing

ASSISTANT SYSTEMS ADMINISTRATOR

Provo, Utah

Nov. 2015 - PRESENT

- Linux Infrastructure Engineer maintaining storage, authentication and user experience.
- Migrated to a new LDAP cluster and schema using SaltStack
- Implemented MIT Kerberos in the environment using SaltStack

SolvereOne and HouseCall IT

SYSTEMS ADMINISTRATOR

Dulles, Virginia and Washington D.C.

Jun. 2013 - Oct. 2015

- Maintaining and designing secure network deployments.
- Deploying and maintaining Windows user and application systems.
- Catch-all Linux Administration

Education

BYU (Brigham Young University)

B.S. IN ELECTRICAL ENGINEERING

Provo, Utah

Sept. 2015 - Exp. Apr. 2019

- Lead Communications Engineer on BYU's first small satellite mission

TJHSST (Thomas Jefferson High School for Science and Technology)

HIGH SCHOOL DIPLOMA

Alexandria, Virginia

Sept. 2011 - Apr. 2015

- Completed Senior Research designing NFC systems

Projects

CCSDS Kernel Driver

LINUX ADDRESS FAMILY

Jul. 2017

- Designed and implemented linux kernel address family that adds CCSDS Space Packet Protocol support

Competencies

- Active Directory, LDAP, Kerberos, Cisco IOS, Sophos UTM, Python, Haskell, C, C++, Embedded Development, Windows Server 2008 - 2012 R2, CentOS/Ubuntu/Gentoo/RedHat Linux, BSD, Ansys HFSS, Matlab, Mathematica, VMware vSphere, VMware View, Microsoft Office, Nagios, Apache, NGINX, MySQL, PostgreSQL, HTML5, JavaScript, CSS, Java, Windows XP - 10, ZFS, SaltStack, LTspice, Eagle, Amateur Radio, FCC Licensing, RF Systems, Modulation, Packetization and Framing, GNURadio, Ettus USRP, Nuand BladeRF

Boy Scouts of America

EAGLE SCOUT

National Capital Area Council

Jul. 2011 - Present

- Designed and manufactured garden signs for the Old Stone House on M. Street in Washington D.C