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 for fun. 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
Provo, Utah

LEAD COMMUNICATIONS ENGINEER — *Apr 2016 - PRESENT*

- Twin satellites will fly in early 2018
- Design an end-to-end satellite communications system within technical constraints
- Lead 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
Provo, Utah

ASSISTANT SYSTEMS ADMINISTRATOR — *Nov 2015 - PRESENT*

- Developed Linux Infrastructure to maintain storage, enable authentication and enhance the user experience
- Migrated to a new LDAP cluster and schema using SaltStack
- Implemented MIT Kerberos in the environment using SaltStack

SolvereOne and HouseCall IT
Dulles, Virginia and Washington D.C.

SYSTEMS ADMINISTRATOR — *Jun 2013 - Oct 2015*

- Maintained and designed secure network deployments
- Deployed and maintained Windows user and application systems
- Managed Linux administration

Education

BYU (Brigham Young University)
Provo, Utah

B.S. IN ELECTRICAL ENGINEERING — *Sep 2015 - Exp. Apr 2019*

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

TJHSST (Thomas Jefferson High School for Science and Technology)
Alexandria, Virginia

HIGH SCHOOL DIPLOMA — *Sep 2011 - Jun 2015*

- Designed NFC System for Senior Research Project

Projects

CCSDS Kernel Driver

LINUX ADDRESS FAMILY — *Jul 2017*

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

Extracurricular Activity

Boy Scouts of America
National Capital Area Council

EAGLE SCOUT — *Jul. 2011 - Present*

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

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, Autodesk EAGLE, Amateur Radio, FCC Licensing, RF Systems, Modulalation, Packetization and Framing, GNURadio, Ettus USRP, Nuand BladeRF
- BSA Eagle Scout - (Insert date here)