

Jacob Holtom

ELECTRICAL ENGINEER · SYSTEMS ADMINISTRATOR

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Work Experience

Artemis Inc

RADAR ENGINEERING INTERN

- Evaluate and develop autofocus algorithms for Stripmap SAR using Time-Domain Backprojection
- Explore and develop combined radar and communications waveforms
- Develop machine learning models for SIGINT
- Develop direction finding algorithms for co-operate use on Software Defined Radar

Spanish Fork, Utah

Apr 2019 - PRESENT

BYU Spacecraft Group

LEAD COMMUNICATIONS ENGINEER

- Oversee twin satellites will fly in Sept 2019
- Design an end-to-end satellite communications system within technical constraints
- Lead RF engineering work including the design of dish and on-board antennas and amplifier systems
- Develop custom ground station system that utilizes an Ettus USRP and GNURadio

Provo, Utah

Apr 2016 - Apr 2019

L-3 Communication Systems West

RF ENGINEER

- Design RF hardware for mission critical systems
- Test and debug RF hardware
- Work in team and follow standard engineering process

Salt Lake City, Utah

Jan 2018 - Sep 2018

BYU Computer Aided Engineering Design and Manufacturing

ASSISTANT SYSTEMS ADMINISTRATOR

- 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

Provo, Utah

Nov 2015 - Jan 2018

SolvereOne and HouseCall IT

SYSTEMS ADMINISTRATOR

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

Dulles, Virginia and Washington D.C.

Jun 2013 - Oct 2015

Education

ASU (Arizona State University)

M.S. IN ELECTRICAL ENGINEERING

- Pursuing thesis based masters in Electrical Engineering
- Focus on Electromagnetics, RADAR, Communications and satellite systems

Tempe, Arizona

Aug 2019 - PRESENT

BYU (Brigham Young University)

B.S. IN ELECTRICAL ENGINEERING

- Math Minor

Provo, Utah

Sep 2015 - Apr 2019

TJHSST (Thomas Jefferson High School for Science and Technology)

HIGH SCHOOL ADVANCED STUDIES DIPLOMA

- Designed NFC System for Senior Research Project
- Ranked number one high school in the United States

Alexandria, Virginia

Sep 2011 - Jun 2015

Projects

CCSDS Kernel Driver

LINUX ADDRESS FAMILY

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

Jul 2017

Publications

- 2019 **Passive CubeSats for remote inspection of space vehicles**, Journal of Applied Remote Sensing
- 2018 **Femtosaurs: Elegant Flight Telemetry for Model Rockets**, International Telemetry Conference

*Cubesats and
Nanosats for
Remote Sensing
Glendale, Arizona*

Extracurricular Activity

Boy Scouts of America

EAGLE SCOUT

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

National Capital Area Council

Jul. 2011 - Present

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 365, Nagios, Apache, NGINX, MySQL, PostgreSQL, HTML5, JavaScript, CSS, Java, Windows XP - 10, ZFS, SaltStack, LTspice, Autodesk EAGLE, Amateur Radio, FCC Licensing, RF Systems, Modulation, Packetization and Framing, GNURadio, Ettus USRP, Nuand BladeRF, RF Analysis, Mentor Graphics Expedition, RF PCB Layout, RF Testing Equipment (Spectrum, Network Analyzers, etc.), National Instruments AWR, Keysight ADS