Jacob **Holtom**

ELECTRICAL ENGINEER · SYSTEMS ADMINISTRATOR

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Work Experience

Artemis Inc *Spanish Fork, Utah*

RADAR ENGINEERING INTERN *Apr 2019 - PRESENT*

- 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 dirction finding algorithms for co-operate use on Software Defined Radar

BYU Spacecraft Group *Provo, Utah*

LEAD COMMUNICATIONS ENGINEER *Apr 2016 - Apr 2019*

- 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

L-3 Communication Systems West *Salt Lake City, Utah*

RF ENGINEER *Jan 2018 - Sep 2018*

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

BYU Computer Aided Engineering Design and Manufacturing *Provo, Utah*

ASSISTANT SYSTEMS ADMINISTRATOR *Nov 2015 - Jan 2018*

- 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

Arizona State University *Tempe, Arizona*

M.S. IN ELECTRICAL ENGINEERING *Aug 2019 - PRESENT*

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

Brigham Young University *Provo, Utah*

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

- Math Minor

Thomas Jefferson High School for Science and Technology *Alexandria, Virginia*

HIGH SCHOOL ADVANCED STUDIES DIPLOMA *Sep 2011 - Jun 2015*

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

Projects

CCSDS Kernel Driver

LINUX ADDRESS FAMILY *Jul 2017*

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

Publications

2019   **Passive CubeSats for remote inspection of space vehicles**, Journal of Applied Remote Sensing

2018   **Femtosats: Elegant Flight Telemetry for Model Rockets**, International Telemetry Conference

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, Modulalation, Packetization and Framing, GNURadio, Ettus USRP, Nuand BladeRF, RF Analysis, Mentor Graphics Xpedition, RF PCB Layout, RF Testing Equipment (Spectrum, Network Analyzers, etc.), National Instruments AWR, Keysight ADS