

WORK EXPERIENCE

June 2018 – Present	Software Engineer – X (formerly Google X)	Mountain View, CA
Feb 2018 – Jun 2018	Embedded Systems Engineer – Matternet - Wrote CANopen protocol drivers for Linux	Menlo Park, CA
Sep 2015 – Feb 2018	Systems Engineer and Flight Team Lead – Prenav, Inc. - Developed a novel decimeter precision local positioning system using ultra-wideband radios which outperformed similar competing systems - Designed and tested multiple PCB boards with mixed signal RF requirements - Wrote multiple low-level drivers for IMUs, GPS receivers, radio transceivers, etc. - Created embedded multitasking software using FreeRTOS in C and C++ - Worked on Linux kernel drivers and bootloaders for embedded systems incl. Yocto - Acted as Chief Pilot and Flight Team Leader since Oct 2016, responsible for flight testing - Designed and fabricated multiple quadcopter iterations using Solidworks and CNC mills - Researched new ducted fan technology for low Reynolds number flows	San Carlos, CA
Sep 2014 – Sep 2015	Systems and Software Developer – Autonomous Space Telescope (AAReST) - Developed Mission Requirements and Software Requirements Specifications - Designed and implemented the satellite bus software in C - Collaborated with NASA's Jet Propulsion Laboratory through weekly reviews	Pasadena, CA
Aug 2013 – Jun 2014	Research Assistant – Mesosphere Turbulence Experiment - Created instrument booms to be flown on a NASA sounding rocket - Responsible for design, analysis, fabrication, and testing - Collaborated with engineers at NASA Wallops - Launch and successful mission completion at Poker Flats, AK (Jan 2015)	Daytona Beach, FL
Jun 2013 – Sep 2013	Research Fellow – California Institute of Technology - Advanced applied physics research in hydrogen adsorption materials - Created and modelled thousands of metallic organic frameworks on super computers	Pasadena, CA

PROJECT EXPERIENCE

Oct 2013 – Jun 2014	Competition Member – Advanced Rocket Avionics System - Created a control and communications system for multi stage rockets - Designed software, PCB electronics, and system architecture	Daytona Beach, FL
Oct 2012 – Apr 2014	Team Leader and Founder – Electrodynamic Tether CubeSat Satellite - Led a team of 17 undergraduate students - Wrote NASA ELaNa launch and research grant proposals - Designed and built a two-axis satellite tracker including software written in Python	Daytona Beach, FL
Jan 2012 – Apr 2014	Research Assistant and Team Leader – Autonomous Underwater Vehicle - Developed both the software and mechanics of the control system	Daytona Beach, FL
Jun 2010 – Dec 2010	Independent Project – Built a 3-axis CNC Router - Designed and built a CNC routing machine, 7 by 10 feet large	Lillaröd, Sweden

EDUCATION

Sep 2014 – Jun 2015	California Institute of Technology Master of Science in <i>Space Engineering</i>	Pasadena, CA
May 2014	Embry-Riddle Aeronautical University Bachelor of Science in <i>Engineering Physics: Spacecraft Instrumentation</i> Bachelor of Science in <i>Computational Mathematics</i> Minor in <i>Computer Science</i> Received the <i>Honors Program Graduate Award</i> and <i>Engineering Physics Scholar Award</i>	Daytona Beach, FL
Apr 2013	Licensed Amateur Radio Operator	Daytona Beach, FL
Oct 2009	Private Pilot, Single Engine	Fort Pierce, FL