

Jesse A. Wigfield

jawigfield@cpp.edu

(760) 793-9072

INTERESTS	Software Development involving Embedded Systems and Control Systems	
EDUCATION	California State Polytechnic University , Pomona, CA. B.S. in Electrical Engineering	Graduating December 2016 (Core GPA: 3.94/4.0) (Overall GPA: 3.52/4.0)
TECHNICAL SKILLS	Programming: C++, MATLAB, Python, Verilog, VHDL, P Spice, SQL, SVN, Git Operating Systems: Windows, Linux, Mac OSX Hardware: Microcontrollers, Spartan 3 FPGA, Oscilloscope, Soldering, Electric Drive Systems	
PROFESSIONAL EXPERIENCE	NASA JPL , Pasadena, CA. US. <i>Simulation and Support Equipment Division</i> <ul style="list-style-type: none">• Developing support equipment to test Mars-2020 motors• Researched and developed algorithms to Auto-Code spacecraft simulations from SysML models Campfire Alaska , Anchorage, AK. US. <i>Recreation Senior Staff</i> <ul style="list-style-type: none">• Led a team of three youth counselors to remote Alaskan communities• Taught the children swimming skills, cold water safety, and life skills China Lake Child and Youth Programs , Ridgecrest, CA. US. <i>Lead Staff</i> <ul style="list-style-type: none">• Directed a staff of 10-20 counselors in youth development programs• Created three new youth clubs: Rock Wall Club, Paintball Club, and Fix-It Club	June 2016 – Present May 2009 - September 2014
PROJECTS	Spacecraft Simulation Auto-Coding - NASA Researched and developed algorithms to: <ul style="list-style-type: none">• Query SysML spacecraft models for components• Match components with an SQL database of standardized components, check inter-dependencies• Auto-code simulation initialization with matched components Micromouse Autonomous Maze Solving Robot - IEEE <ul style="list-style-type: none">• Designed and tuned a PID control algorithm using C++ and an Atmel microcontroller• Provided precise control of two synchronized DC motors• Taught microcontroller programming to new members of IEEE RF Range Finding - Senior Project <ul style="list-style-type: none">• Implemented Silicone Instruments RF transmitters and receivers via PIC microcontrollers• Utilized matching circuitry, oscilloscope FFT, and band pass filters• Accurately measured the time of signal travel using a Texas Instruments time to digital converter VHDL Trigonometric Calculator Implemented - Spartan 3 FPGA <ul style="list-style-type: none">• Designed a sine and cosine calculator using the CORDIC algorithm• Accomplished multiplication and division with structural arrays of adders Team Research and Development Project - Traditional AI Methods <ul style="list-style-type: none">• Used MATLAB to study the effectiveness and utilization of the A* graph traversal algorithm• Completed an algorithm that could solve mazes and illustrate the fastest possible solution	
PERSONAL ACHIEVEMENTS	Eagle Scout <ul style="list-style-type: none">• Orchestrated troop meetings, camp-outs, hikes, and community service events	