

Jesse A. Wigfield

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EDUCATION	California Sate Polytechnic University , Pomona, CA. Graduating December 10, 2016 B.S. in Electrical Engineering (Overall GPA: 3.55/4.0) (Core GPA: 3.94/4.0)
TECHNICAL SKILLS	Programming: C++, MATLAB, Python, Verilog, VHDL, P-Spice, SQL, SVN, Git, LabVIEW Operating Systems: Windows, Linux, Mac OSX Hardware: PCB Design, Microcontrollers, Spartan 3 FPGA, Motors, Oscilloscopes, Soldering
PROFESSIONAL EXPERIENCE	NASA Jet Propulsion Laboratory , Pasadena, CA. US. June 2016 – Present <i>Simulation and Support Equipment Division - Intern</i> <ul style="list-style-type: none">Working with experienced engineers, learning the fundamentals of spacecraft simulation & testingRapidly developed prototypes under strict mission time-lines and complex design constraints Campfire Alaska , Anchorage, AK. US. Summer 2015 <ul style="list-style-type: none">Led a team of three youth counselors to remote Alaskan communitiesTaught the children swimming skills, cold water safety, and life skills China Lake Child and Youth Programs , Ridgecrest, CA. US. May 2009 - September 2014 <ul style="list-style-type: none">Directed a staff of 10-20 counselors in youth development programsCreated three new youth clubs: Rock Wall Club, Paintball Club, and Fix-It Club
PROJECTS	NASA - Electronic Support Equipment for InSight and M2020 motors <ul style="list-style-type: none">Engineering hardware and user interfaces to control and protect flight hardware during testingDrawing PCB designs, schematics, and wiring diagrams for review and assembly of equipmentAssembled designs capable of safely verifying operation of DC and Stepper Motors via LabVIEW NASA - Spacecraft Simulation Auto-Coder <ul style="list-style-type: none">Developed Python algorithms to Query SysML spacecraft models for componentsConceived algorithms for component matching utilizing an SQL database of JPL componentsAuto-coded simulation initialization with matched components and their interconnections IEEE - Micromouse Autonomous Maze Solving Robot <ul style="list-style-type: none">Designed and tuned a PID control algorithm using C++ and an Atmel microcontrollerProvided precise control of two synchronized DC motorsTaught embedded programming in C++ to new members of IEEE Senior Capstone - RF Range Finding <ul style="list-style-type: none">Implemented Silicone Instruments RF transmitters and receivers to determine distancesUtilized PIC microcontrollers, matching circuitry, oscilloscope FFT, and band pass filters Spartan 3 FPGA - VHDL Trigonometric Calculator Implemented <ul style="list-style-type: none">Designed a sine and cosine calculator using the CORDIC algorithmAccomplished multiplication and division with structural arrays of adders Artificial Intelligence Methods - Team Research and Development Project <ul style="list-style-type: none">Used MATLAB to study the effectiveness and utilization of the A* graph traversal algorithmCompleted an algorithm that can 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