Aaron M. Wood  
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**SUMMARY**

Motivated worker with excellent technical skills and education in robotics, electrical engineering, software development and computer systems. Diverse background and interests include Eagle Scouts, NCAA swimming.

**CORE STRENGHTS AND SKILLS**

* Programming Languages: C, Embedded C, Verilog, Assembly, JAVA
* Software proficiencies: Microsoft Office, Vivado, SolidWorks, MATLAB, Simulink, PSPICE
* Programming on Operating Systems, Embedded Systems, FPGAs, Unix, IDE
* Communications: Technical Writing, Oral Presentations, Team Leadership, Project Planning

**PRIOR WORK EXPERIENCE**

**Electrical Engineering Intern at HERE Technologies.** *Localization Sensor Design Engineering for Highly Automated Driving: (June 2019-August 2019)*

* Lead Design Engineer of prototype localization sensor
* Digital Signal Analysis, Sensor System Design and Analysis,
* Aided in setting project goals and milestones, created dynamic project plan, and assessed progress, test conditions, deliverables

**EDUCATION**

**Bachelor of Science in Robotics Engineering with a Minor in Electrical Engineering**  
University of California Santa Cruz: Graduation - June 2020  
Current GPA: 3.6

**Key course work** *– June 2019*

* Introduction to Mechatronics: Mechanical and Electronic Design, Programming Systems Design, Sensor Input, Mechanical Design, Embedded Systems, SolidWorks, Work in teams
* Microprocessor System Design; serial and parallel communication, analog and digital system interface, network system design, digital signal analysis, Verilog, System level design, Programmable Logic, Vivado, Field Programmable Gate Arrays, Computer Aided Design and Simulation Tools
* Feedback Control Systems: Analysis and design of continuous linear feedback control systems, frequency response, state space methods, Time and Frequency domain analysis, applications
* Analog Electronics: Semiconductor design and analysis, signal modeling, feedback, analog signal analysis
* Sensor Design: Sensor Network Design, Non-ideality Calibration, Signal Conditioning, Analog to Digital Conversion

**PROJECTS**

*SlugSat University of California Satellite Development (June 2019 – June 2020)*

* Team of 18 engineers tasked with design and construction of satellite to carry out particle physics science experiment
* Worked on ground station software and digital hardware design, satellite telemetry protocol software, highspeed radio frequency protocol
* Multi-year project expected to be ready for launch in June 2023

*Closed Loop Attitude Estimation Algorithm (March 2020)*

* Used 9-axis Inertial Measurement Unit to Estimate Orientation in Space
* Closed Loop Feedback continuously measures error and attempts to correct
* Written in C and implemented on Uno32 Microcontroller
* Output simulated and verified using MATLAB

*Slugnificant Seven Robotics Competition (November - December 2018)*

* Team of 3 engineers tasked with the design and construction of a 100% autonomous robot that can shoot a ping pong ball at another robot through obstacles without being shot first
* 5 week deadline
* Designed and programmed by only team members using UNO32
* Major Skills Involved: included Sensor Network Design and Calibration, Actuator Optimization and Calibration, Computer Aided Design and Fabrication, Low Level Artificial Intelligence Design
* Concurrent with Introduction to Mechatronics class

**AWARDS/ACHIEVEMENTS**

* Student Atheletic Advisory Committee Leadership and Career Service Award: June 2020
* Ted Bramble Work Ethic and Leadership Award: April 2020
* Chris Knorr Team Leadership Award: January 2020
* Member Tau Beta Pi Engineering Honor Society: 2019-present
* Most Improved Veteran Member of University of California Swimming and Diving Team: 2017-2018
* Academic Dean’s List: Spring 2017, Fall 2017
* Eagle Scout: October 2015