# Grayson Lewis

Electrical and Computer Engineering Student

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## EDUCATION

**Oregon State University**                                                                                                  *Corvallis, OR*
Electrical and Computer Engineering, GPA: 4.0                                                   September 2018 - Present
- **Engineering Coursework**: Data Structures, Digital Logic, Circuit Analysis: DC, AC, Complex Domain, Fourier Series.
- **Other Coursework**: Economics, Accounting, Financial Management
- **Extra-Curricular Activities**: Remote-Control Helicopters, Photography, National Honors Society, FIRST Robotics.

## SKILLS

**Languages**   Python, C, C++, Octave, Javascript, SystemVerilog
**Software**   Altium Designer, Intel Quartus, Intel ModelSim, Node Red, LTspice, Atmel Studio
**Hardware**   Digital Oscilloscope, FPGA Programming, AVR/Arduino Firmware, PCB Assembly, Mechanical Assembly

## EXPERIENCE

**Agility Robotics**                                                                                                            *Albany, OR*
Hardware Engineering Intern                                                                                      July 2020 - Present

**ATAMI**                                                                                                                      *Corvallis, OR*
IT Technician                                                                                                        July 2019 - July 2020
- Managed development of data collection system to evaluate heat exchanger performance.
- Led embedded software development for wireless temperature monitoring system.
- Developed software and circuitry for user programmable IR remote control.

**ORRO**                                                                                                                       *San Mateo, CA*
Product Standards Research Intern                                                                    July 2018 - September 2018
- Researched and recommended for purchase two UL standards.
- Coordinated regularly with management to assess project deliverables, and presented findings.
- Analyzed and summarized requirements for each standard to determine hardware compliance.
- Conducted functional hardware testing to assess performance of sensors, touchscreen and mechanical buttons.

## PROJECTS

**Digital Signal Generation and Processing Using FPGA**
                                                                                                                                     Fall 2019
- Developed and implemented finite-state machines to generate VGA signals, and process serial input.
- Collaborated with team members to identify project requirements, delegate tasks, and meet deadlines.
- Wrote designs in SystemVerilog and simulated to validate functionality using Intel ModelSim.

**Implementing Machine Learning Algorithms**
                                                                                                                                  Summer 2019
- Implemented common machine learning algorithms using Octave (scientific programming language).
- Forward-pass Neural Network to classify hand-written digits.
- Multi-class logistic regression classifier.
- Multi-variable regression model optimized via gradient descent.

**User Programmable IR Remote**
                                                                                                                                  Summer 2019
- Managed software and hardware development to record, store and send infrared signals.
- Created user-friendly interface to allow end user to program remote to control a variety of devices.
- Utilized hardware and software power saving measures to obtain one year battery life from two AA batteries.