OWEN VALDESCRUZ

561-906-1821 ⋄ owen.l.val@gmail.com

Seattle, WA

Check out my work at owen.life

EDUCATION

University of Illinois *January 2021 - May 2022*
M.Eng Bioengineering - Concentration: Bioinstrumentation
GPA: 3.75

Cornell University *August 2017 - December 2020*
B.S Electrical and Computer Engineering
GPA: 3.6 *Cum Laude*

Relevant Coursework: Surgical Technologies (S'22), Biological Measurement (F'21), Advanced Microcontroller Design (F'20), Applied Remote Sensing (F'20), Design with Embedded OS (S'20)

SKILLS

Programming Languages	Python, C/C++, Verilog/VHDL, MATLAB, Bash, SQL, VBA
Hardware	STM32, ARM Cortex, Arduino, FPGA, Raspberry Pi, IOT
Software & Tools	Mbed OS, RTOS, Altera Quartus, GIS, Linux, Tableau, LaTeX, Office

EXPERIENCE

General Electric Research Center *July 2022 - Present*
Edison Engineer

· Develop firmware for ultrasonic therapy device on STM32 microcontroller
· Created custom serial protocol for communication with base station software using Python
· Support FAA certification testing for the GE9X engine on the Boeing 777X airframe
· Execute data collection and post-flight data analysis of engine controls using software tools developed in Python, Perl, and VBA

Naval Nuclear Laboratory *March 2021 - March 2022*
Electrical Systems Engineer

· Performed analysis on embedded sensor data with SQL, PySpark, and Tableau in order to increase availability and efficiency of US Navy submarines
· Submitted and reviewed technical manuals and procedure changes
· Coordinated program development between hardware, software, and test groups yielding 50% decrease in production time

RESEARCH

HemoHome Capstone Project *August 2021 - May 2022*
Team Member

· Constructed a prototype home dialysis system using an Arm Cortex processor and custom PCB
· Developed a companion Android App to communicate with and control dialysis system

UIUC Nanosensors Group *March 2021 - September 2021*
Graduate Research Assistant

· Built power circuitry and protection software for point-of-care wireless viral tester now published in Volume 229 of *Biosensors and Bioelectronics*
· Implemented an encryption protocol for relaying patients' test results to an iOS app using Bluetooth Low Energy

Cornell Initiative for Digital Agriculture *October 2019 - December 2020*
Undergraduate Research Assistant

· Established a custom serial addressing protocol over RS485 bus to communicate with embedded sensor network
· Interfaced custom embedded IOT datalogger with a Raspberry Pi to visualize data on a mobile dashboard