ABOUT ME

Diego Aguilera

Electrical Engineer

Diego Aguilera Resume - Need to add more about me here! Ugh Words. Something about Family. Photos. Goals: Machine Learning. Further develope Python skills. Refer to Github projects. Section on projects? 3D modeling. Daily routine.

WORK EXPERIENCE

Companies I've had the pleasure to work for.

Present

2016-02-07

Mueller Company

Electrical Engineer

Electrical Engineer & Hardware/Software Developer. Hired to further develop sensor platform for remote pressure monitoring, Production software and product testing.

- Developed LTE based low power battery powered PCB with 5 year+ life.
- Worked with vendors to create specifications for low power submersible pressure sensor.
- Developed Linux based Production software to program devices, interrogate modems, print labels, and calibrate sensors. SSH for remote access for troubleshooting and updating.
- Managed two different PCB manufacture/designers to develop Smart Hydrant PCBs. These included RF (Bluetooth, GPS, and LTE circuits).
- Involved in early development of Smart Hydrant, production instructions, testing, and calibration. Currently working with plants and sourcing of electronics related parts.
- Currently working on Automated Testing and Production Validation hardware to test products. Currently controlling/reading enviromental chamber (temperature/humidity), pressure regulator, calibrated pressure sensor, DUT UART, and high-speed pressure generation/acquisition. All devices are USB (FTDI) and maintained with udev rules. All points are captured to SQLite files and plotted using Bokeh library. Each test is developed/specified in Github and translated into Python code. Each test is run via JupyterLab notebook and analyzed using separate notebook.

2016-02

2016-07

Variable Inc.

Electrical Engineer & Hardware/Firmware Developer.

Started as an intern with the NODE wireless sensor platform manufacturer. After completing Engineering degree was hired on full-time. Worked on special projects and lead development of new sensor module technologies. Truely able to develop a love for Python. Came out of a need from need of displaying sensor data. Started with simple PCB design to writing of FW.

- Worked on sensor modules: CO2, Wi-Fi, High Speed Accelerometer, Airflow, Radiation, Photon (mini-spectrometer), Nanobeak (electrochemical), Chroma (currently sold on the market under Color Muse).
- High Speed Accelerometer included 8 accelerometers multiplex together. Module was proven using FFT algothrims measured against known frequencies.
- PCB design that included DAC, ADC, active filtering, super capacitor implementation, generation/syncing of multiple clocks, i2c, SPI, and UART communications.
- Development of firmware and calibration jigs/processes for multiple modules.

- As lead developer for Nanobeak, developed Python based tools to calibrate, analyze, and read 32 sensors.
- Integrated mini spectrometer sensor to platform. Wrote Python code to perform calibration, capture 256 wavelengths and improve accuracy of device.

2019-09

2013-08

U.S. ARMY

Calibration Technician

Completed two deployments to Iraq

- Performed calibration by alignment and adjustment of electronic/mechanical components by comparing measurements to a known standard.
- Diagnosed/repaired special purpose equipment down to the board level.

EDUCATION & DIPLOMAS

Quisque sit amet est et sapien ullamcorper pharetra. Vestibulum erat wisi, condimentum sed, commodo vitae, ornare sit amet, wisi.

2013-05

B.S., Electrical Engineering

UNIVERSITY OF TENNESSEE AT CHATTANOOGA

Bachelor of Science

2004

Certificate

MISSILE AND MUNITIONS SCHOOL, Redstone Arsenal, AL

Developed equipment proficiency in oscilloscopes, multi-meters, counters, frequency generators, spectrum analyzers, pressure, temperature, mass and torque indicating test equipment.

2003-08

A.S., Arts
PALM BEACH COMMUNITY COLLEGE, Boca Raton, FL

LANGUAGES

Non-programming languages.

SPOKEN	WRITTEN