

Darren Newell

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Electrical Engineering Major (Jr), Seeking internships in embedded systems and hardware design

EDUCATION

San Francisco State University – *Electrical Engineering, 3.54 GPA, Dec. 2021*

Relevant coursework:

Electric Circuits, Linear Systems Analysis, Microelectronics, Digital Signal Processing

IN PROGRESS: Design with Microprocessors, Digital Design with Verilog

SKILLS

Languages: C++/C, Verilog, MATLAB

Software: Keil uVision, MATLAB/SimuLink, Quartus Prime, LTSpice, Arduino IDE, Eagle CAD

Hardware: Circuitry, Soldering, Electrical Test Measurements (DC Power Supplies, DMM, Oscilloscope)

Leadership: Systemic Organizing, Operations management, Campaign coordination.

Spoken Languages: German (native), Spanish (conversational)

PROJECTS - <https://www.itsdarren.page>

MKR1000 WiFi Dust Sensor Project – *Expected Completion: October 25, 2020*

- Indoor air quality sensor, developed using Arduino MKR 1000 and Sharp GP2Y1010AU0F Dust sensor.
- Sends phone notification via a Telegram Bot to turn on air filter when PM 2.5/PM 10 density reaches unhealthy levels.
- Programming learned: Precision timing for sensor readings, interpreting Analog to Digital voltage conversion, wireless communication, troubleshooting and debugging using serial monitor and a MyDAQ oscilloscope.

IoT Coffee Maker – *Expected Completion: November 30, 2020*

- Class group project, using TI Tiva Launchpad, ARM Cortex M4 architecture, to create WiFi enabled digital controller for coffee maker.
- Programming in C to turn coffee maker on/off via on-board switch or phone input, to send notification when coffee is ready, and timer to automatically turn coffee maker off.

VOLUNTEER EXPERIENCE:

San Francisco State IEEE Student Branch – *President (February 2020 - Current)*

- Providing opportunities to fellow students through maintaining 2 existing and developing 3 new industry contacts to host workshops.
- Supervised and led 6 online crash course seminars during transition to remote learning.
- Delegated responsibilities for 5 officers to successfully carry out dozens of events, begin a biweekly newsletter, and increase social media presence.

WORK EXPERIENCE:

San Francisco Bicycle Coalition – *Campaign Coordinator (August 2019 - May 2020)*

- Accomplished passing of Better Market Street Proposal through organizing groundswell of community support. Created record turnout for SFMTA meeting.

Coalition of Concerned Medical Professionals – *Operations Manager (March 2015 - March 2018)*

- Ran all-volunteer office to connect uninsured/underinsured with volunteer medical and dental care providers. Recruited 3 nurses, 2 dentists, a doctor and an optometrist as new service providers.
- Set a new record for monthly fundraising, oversaw donated renovation of the organization's office, recruited and trained 12 new weekly volunteers in advocacy and outreach.