Jaap de Dood

Long Beach, CA 90815
(562) 296-3974 • jaapdood@gmail.com • jaapdedood.com
jaapdedood • jaapdedood

Education

California State University, Long Beach **Long Beach, CA**
Bachelor of Science, Electrical Engineering, Summa Cum Laude, GPA 3.95/4.00 August 2015 – May 2019
Electrical Engineering Outstanding Baccalaureate Graduate Award

Relevant Courses: Mixed-Signal IC Design, Electronic Systems Design, Microprocessors I/II, CMOS VLSI Design, Analog Circuits I/II, Control Systems, Communication Systems, Digital Signal Processing, Digital System Design (HDL), MATLAB

Work Experience

Arxterra **Huntington Beach, CA**
Hardware Design Engineer/Project Lead – 3DoT, Humans for Robots August 2019 – Present

- Lead a team of 3 people to release and support a consumer electronics product + accessories.
- Revised hardware designs from rapid prototypes to mass-produced product, including high speed and low speed communication protocols (USB, SPI, I2C and UART).
- Ensured product quality by creating QA test plan and designing test hardware with documentation for team members to use.
- Met with 3rd party suppliers in Shenzhen, China, to set up supply chain and cut cost of product by >60%.
- Developed hardware and software for Nordic Semiconductor Bluetooth low energy System-on-a-chips.

Engineering Intern Dec. 2018 – August 2019

- Developed schematics and PCB layouts for 2-4-layer boards, meeting internal requirements for EMC, manufacturing, reliability and cost.
- Resolved years-old power issues through signal characterization on lab equipment, hardware debugging and functional verification of solutions.
- Collaborated on object-oriented C++ robot software and C/inline assembly MCU firmware.

Project Experience

Projects

- Micromouse autonomous robot competition.
  - Designed schematic and PCB layout for three generations in Altium Designer.
  - Wrote stack-based flood fill pathfinding algorithm in C++ for ARM Cortex M4 Processor
- IoT waste data collector "Trash sCan".
  - Won 1st prize "Best IoT Hack" at UCSB Hackathon.
  - Wrote firmware to interface Qualcomm DragonBoard™ with hardware in C.
- Chem-E-Car
  - Built electronics to operate with homemade chemical battery, withstand harsh conditions and be used by non-technical users.
  - Car won 1st place at AIChE Western Regional Conference the following year using my electronics.
- Solar kiosk mobile energy project.
  - Received $2500 grant from IBM Students for a Smarter Planet.
  - Won 1st place in CSULB Green Generation Mixer Project Showcase.

Student Organizations

- Institute of Electrical and Electronics Engineers (IEEE) – CSULB Student Branch President.
  - Oversee operations for club with ~200 active members.
  - Won IEEE award for "Outstanding Large Student Branch" during my presidency for excellence of workshops and technical programs.