

Jaap de Dood

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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 consumer and professional robotics products.
- Revised hardware designs from rapid prototypes to mass-produced product.
- 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.
- Configured and serviced new laser cutting, CNC routing and Pick & Place equipment to drastically improve prototyping/production capabilities and efficiency.

Engineering Intern

December 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 issues of low-power battery system through failure analysis using lab equipment and working with mentor to redesign power system.
- Collaborated on object-oriented C++ robot software and C/inline assembly microprocessor 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.
 - Won IEEE award for “Outstanding Large Student Branch” during presidency for excellence of workshops and technical programs.