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

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**
Engineering Intern Dec. 2018 – Present

- Developed schematics and PCB layouts for 2-4-layer boards, meeting internal requirements for EMC, manufacturing, reliability and cost.
- Resolved years-old power issues on main product by diagnosing PCB using oscilloscope and developing design improvements.
- Collaborated on object-oriented C++ robot software and C++/inline assembly MCU firmware.

California State University, Long Beach **Long Beach, CA**
Supplemental Instruction Leader Aug. 2017 – Dec. 2018

- Planned and held classes in calculus to provide a collaborative peer-learning experience to improve understanding of subject content, foster critical thinking, and strengthen study skills.
- Improved student grades by an average of 10% compared to course average.

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++.
  - Developed robot software for ARM Cortex-M4 MCU.
- IoT waste data collector "Trash sCan".
  - Won 1st prize "Best IoT Hack" at UCSB Hackathon.
  - Contributed to data parsing software in Python.
  - Wrote firmware to interface Qualcomm DragonBoard™ with hardware in C.
- Chem-E-Car
  - Designed electronics system to control motor speed based on chemical reaction
  - 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.
  - Built system to comply with University Environmental, Health & Safety (EH&S) Standards.

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.