# 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 consumer products.
- Diagnosed prototypes with oscilloscope, bench test equipment and documented results.
- Debugged firmware and developed custom bootloader for MCU.

### 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.
  - O Designed schematic and PCB layout for three generations in Altium Designer.
  - O Wrote stack-based flood fill pathfinding algorithm in C++.
  - Developed robot software for ARM Cortex-M4 MCU.
- IoT waste data collector "Trash sCan".
  - O 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 1<sup>st</sup> place at AIChE Western Regional Conference the following year using my electronics.
- Solar kiosk mobile energy project.
  - O Built kiosk + solar system with two other club members.
  - o Received \$2500 grant from IBM Students for a Smarter Planet.
  - O 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.
  - Meet monthly with industry professionals from IEEE Coastal Los Angeles section.
  - Won IEEE award for "Outstanding Large Student Branch" during my presidency.