

# Jaap de Dood

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## Education

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**Bachelor of Science, Electrical Engineering**, California State University, Long Beach, CA August 2015 - Present

Anticipated graduation: Spring 2019

Current GPA 3.9/4.0

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

## Project Experience

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### Projects

- Micromouse autonomous robot competition.
  - Designed schematic and PCB layout for three generations.
  - Wrote flood fill pathfinding algorithm using stack instructions (C++).
  - Developed robot software for ARM Cortex-M4 MCU.
- Development board design with Professor Gary Hill.
  - Debugged hardware using oscilloscope and other lab equipment.
  - Made design improvements in reliability and PMIC circuitry based on debugging results.
  - Developed custom bootloader for ATmega32u4 (C).
- IoT waste data collector "Trash sCan".
  - Won 1<sup>st</sup> prize "Best IoT Hack" at UCSB Hackathon.
  - Contributed to data parsing software (Python).
  - Wrote firmware to interface Qualcomm DragonBoard™ with hardware (C).
- Solar kiosk mobile energy project.
  - Built kiosk + solar system with two other club members.
  - Received \$2500 grant from IBM Students for a Smarter Planet.
  - Won 1<sup>st</sup> 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.
  - Doubled number of semesterly workshops and won IEEE award for "Outstanding Small Student Branch".
- Engineers for a Sustainable World (ESW) – Solar kiosk project and Webmaster.

## Work Experience

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### California State University, Long Beach

#### Supplemental Instruction Leader

Long Beach, CA

August 2017 - Present

- Plan and hold 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 5% in class of 21 students compared to 135 course students.

### Penguin Air Conditioning and Solar Heating

#### STEM Co-op

Almancil, Portugal

May 2013 - June 2013

- Learned from engineers and technicians while installing solar and heat pump systems.