

# Tristan John de Lemos

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## EDUCATION

California Polytechnic State University, San Luis Obispo

**Bachelor of Science in Computer Engineering**

June 2023

**Related Coursework:** Computer & Digital Design, Computer Programming Series, Electrical Circuit Analysis Series, Operating Systems, Mechatronics, Microcontrollers and Embedded Systems

## SKILLS

**Programming Languages:** C, Java, Python, SystemVerilog, Dart

**Hardware Testing Devices:** Function Generator, Digital and Analog Multimeters, Oscilloscope, DC Power Supply, Op Amp Circuit Board

**Applications:** Github, VScode, Xilinx, PSpice, Pycharm, Microsoft Office Suite (Word, Excel, PowerPoint)

**Languages:** Fluent English and Basic Korean

## PROJECT HIGHLIGHTS

**Bypassing Voice Assistants:** Developed a security testing prototype using an Arduino to output a .wav file via a laser, successfully bypassing voice recognition systems on devices such as Amazon Alexa.

**Turret Control System:** Developed a Python based FSM on a STM32 microcontroller to control motors and filter pictures to fire a NERF turret at the warmest spot of the picture.

**Airable Ventilator:** Designed and developed a Flutter based app to integrate health data from wearable devices (e.g. Apple Watch) with ventilator hardware. Collaborated with a multidisciplinary team to complete hardware design and web development, enabling dynamic ventilator adjustments based on user health metrics.

**Software Development:** Programmed an average of 2 software programs weekly across multiple programming languages, honing problem-solving and coding efficiency.

**Hardware:** Constructed and tested multiple electrical circuit systems using various hardware testing devices

## LEADERSHIP EXPERIENCE

**Substitute Teacher**

8/23 – 1/24, 3/25 - Present

- Castaic Union School District; Santa Clarita, California
- Taught middle school and elementary school ages
- Managed classroom environments and maintained effective communication with students and faculty

**English Second Language Teacher**

2/24 – 3/25

Sogang Language Program; Suwon, South Korea

- Delivered 40+ hours each week of English as a second language
- Taught 50+ students each week
- Taught critical thinking, reading, and living skills
- Collaborated with native Koreans and foreign English speakers to improve the coursework for students