

# Aram Dergevorkian

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## Education

### University of California, Los Angeles

*M.S. Electrical Engineering*

Anticipated June 2024

*Los Angeles, California*

### California State Polytechnic University, Pomona

*B.S. Electrical Engineering*

December 2020

*Pomona, CA*

- President's List, Dean's List, K6CPP Amateur Radio Club President

## Experience

### NASA Jet Propulsion Laboratory

*Electronics Engineer*

Summer 2016 - Present

*Pasadena, California*

- Developed and delivered Digital Backend Electronics for MEM (Microwave Electrojet Magnetogram) instrument.
- Developed and delivered Motor Electronics and Command and Data Handling boards for PREFIRE (Polar Radiant Energy in the Far-Infrared Experiment) TIRS (Thermal InfraRed Spectrometer) instrument.
- Prototyped novel embedded systems architectures, working on hardware, embedded software, and RTL aspects.
- Designed and tested various power supplies for both digital and analog systems.
- Built test equipment for and carried out MIL-STD-461G EMI/EMC testing on electronic assemblies.

### Animatronics Contractor

*Electrical Engineer*

October 2022 - Present

*Pasadena, California*

- Designed and built animatronic control systems and ground support equipment. Performed PID control system tuning, animatronic show programming, lighting design and programming, PLC programming, and audio mixing.

### Columbus Technologies and Services

*Electronics Engineer*

January 2021 - August 2021

*Pasadena, California*

- Developed instrument electronics for PREFIRE CubeSat. Work involved PCB design, embedded software and RTL development, ground support hardware/software development, and testing/documentation.

### La Cañada Flintridge Tournament of Roses Association

*Electronics, Construction Team, Board of Directors*

Summer 2011 - Spring 2019

*La Cañada Flintridge, California*

- Responsibilities varied from electronics to hydraulic/mechanical construction. Specific projects include complete design and assembly of a new animation system, and building a data logger for the float's hydrostatic drive system.

### Artistic Entertainment Services

*Electrical Engineer*

January 2017 - October 2018

*Azusa, California*

- Responsible for the production of TwinkleWorks LED fixtures and LED controllers. Developed new series of RGBW LED fixtures and laid the foundation for future RGBW LED strobe controllers.

### UCLA ELFIN CubeSat Project

*Communications Subsystem Intern*

Summer 2015 - Spring 2016

*Los Angeles, California*

- Tested the spacecraft's AstroDev radios, built and tested communications equipment with Earth Station team.

## Projects

- Designed and built several custom industrial equipment controllers using CAN bus and lighting industry standard protocols (DMX-512, WS2812B, etc.) for automotive and man-portable applications.
- Designed and built an array of control electronics for the Los Angeles Live Steamers Railroad Museum's signalling system using CAN bus and wireless mesh networking.
- Built a variety of radio related electronics, including amplifiers, antennas, and Bluetooth audio and telemetry interfaces. Built ARM based quadrature DSP processor for SoftRock SDR receiver.

## Technical Skills

**Languages:** Verilog, C (ARM, AVR, PIC), XC (XMOSES), Assembly (x86, 68000, 6502, PIC), Python, MATLAB

**Software:** Altium, KiCAD, HyperLynx, Vivado, iCEcube2, uVision, MPLAB, VS Code, LabVIEW, Siemens LOGO!, PCMACS