

Aram Dergevorkian

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Education

University of California, Los Angeles

M.S. Electrical Engineering

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