

# DAVID ARTHURIAN

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## **EXPERIENCE**

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### **Northrop Grumman**

*Electrical Engineer*

**May 2024 - Present**

*Mclean, Virginia*

- Serve as Cognizant Engineer for the Electronic Power Subsystem (EPS) on NASA's HALO spacecraft, leading design, integration, and verification of power distribution hardware supporting critical spaceflight operations.
- Develop, analyze, and validate power electronics and PCB-level hardware, ensuring high-reliability operation in radiation and thermal environments.
- Collaborate with cross-functional teams (systems, mechanical, software, and suppliers) to drive requirements, root-cause hardware issues, and deliver mission-critical hardware under aggressive schedules.
- Conduct circuit-level simulations (LTSpice, OrCAD, Simulink) and hardware bring-up/debug using oscilloscopes, power analyzers, and automated test scripts (Python/Matlab).
- Lead failure analysis and corrective actions for hardware anomalies, improving reliability and reducing integration risk.
- Author and review technical documentation, schematics, and test procedures to meet NASA and industry standards

### **Sempra Energy**

**June 2023 - May 2024**

*Systems Engineer*

*Los Angeles, California*

- Collaborated with an engineering team to design and optimize Southern California CNG/LNG distribution systems for a large-scale critical infrastructure network serving over 500,000 residential, commercial, and industrial customers.
- Developed real-time monitoring and analytics tools using SCADA, GIS, SAP, and SQL to enhance system performance.
- Created emergency response dashboards for system engineers, ensuring rapid diagnostics and failure mitigation.
- Led instrumentation and control system projects, integrating hardware and software for high-reliability gas distribution.
- Conducted data modeling with SQL Data to implement system improvements to improve CNG distribution by 50%.
- Compiled data, created dashboards for emergency scenarios, and provided on-call support for region engineers.
- Designed and executed six-figure capital projects, achieving 25% cost savings and delivery ahead of schedule.

### **University of California, Los Angeles**

**Dec. 2022 - July 2023**

*Computer Engineering Department*

*Westwood, California*

- Implemented a JavaScript-based automation tool that streamlined financial data processing, improving efficiency by 75%.
- Directed a large-scale data organization project to assist leadership in statistical reporting and decision-making.

### **Los Angeles Unified School District**

**Sept. 2022 - June 2023**

*IT Technician*

*San Fernando, California*

- Managed and deployed IT infrastructure for over 1,000 devices, ensuring secure and stable network operations.
- Led hardware/software installations and troubleshooting across campuses, achieving 99% on-time ticket completion.

### **Mathnasium**

**Oct. 2021 - Sept. 2022**

*Manager*

*La Canada, California*

- Spearheaded logistic operations and led a staff of 8 people. Awarded the employee of the month twice for securing 12 new clients & improving productivity by 25%. Taught advanced mathematics instruction to college students by special request.

## **PROJECTS**

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### **Embedded Systems - Video Game**

**Jan. 2024 - May 2024**

- Designed and built an interactive, sensor-based multiplayer video game with IoT communication.
- Created hardware-based motion controllers using Arduinos, IMU sensors, and LEDs for gesture-based input.
- Embedded real-time embedded control and wireless communication protocols for multiplayer synchronization.
- Engineered the game logic in Python and developed a Unity-based graphical interface for stable and fun gameplay.

### **Micromouse Competition - 1<sup>st</sup> Place**

**April 2023 - May 2023**

- Programmed and assembled an autonomous robotic vehicle for maze navigation using PID controllers and IR sensors.

- Integrated real-time embedded control algorithms in C++, optimizing performance for speed and accuracy.
- Achieved 1st place out of 30 participants, completing the challenge with a record time of sub 10 seconds.

**Network Attached Storage (NAS)****July 2022**

- Produced and built a custom NAS system using Raspberry Pi 4 and RAID-configured HDDs to store personal data.
- Configured network protocols and security layers for secure cloud data storage and remote access by individuals.

**SKILLS**

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C++, Python (Aysncio, Matplotlib, Numpy, OpenCV , Pandas, SciPy, Scikit-Learn), Verilog, MATLAB, JavaScript, SQL, VHDL, WebSockets, Altium, LTSpice, OrCAD, PCB Design, SCADA, SAP, GIS, Simulink, Git, Visual Studio, VSCode

**EDUCATION**

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**The University of California, Los Angeles****Sept. 2020 - June 2024***B.S. Electrical Engineering, IEEE Member**GPA: 3.45***EIT Certificate in Electrical Engineering****June 2024**