

MATTHEW MERIOLES

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EDUCATION

University of California, San Diego

M.S. Electrical Engineering: Communication Theory & Systems

September 2025 - Present

Coursework: Modern Communication Networks, Information Theory

University of California, San Diego

B.S. Electrical Engineering: Machine Learning & Controls

September 2020 - June 2024

Coursework: Data Networks I/II, Deep Learning, Intelligent Systems, Digital Design, Software Foundations A/B

EXPERIENCE

Northrop Grumman · Associate Electrical Engineer

September 2024 - Present

- Design, test, and integrate full-stack solutions for core network infrastructure in datacenter builds
- Write automation scripts in Python and Ansible for distributed config generation, deployment, and sustainment
- Implemented network monitoring and observability solutions using the TIG stack along with tools such as SuzieQ, LibreNMS, and custom python scripts for system polling
- Create system build guides using restructured text and sphinx/jinja2 document generation

Skills involved: Python · Ansible · Grafana · InfluxDB · Telegraf · Sphinx · Jinja2 · Docker · HashiCorp Vault · Netbox

Northrop Grumman · Electronics & Payloads Intern

June 2023 - August 2023

- Developed a scalable Python application to remotely connect with network devices and perform configuration analysis, resulting in a streamlined network configuration and validation workflow
- Created and configured Ansible scripts for Cisco Modeling Labs
- Collaborated with network engineers to design, test, and integrate network infrastructure

Skills involved: Python · Paramiko · CML · Network Engineering · Ansible

Northrop Grumman · Electronics & Payloads Intern

June 2022 - August 2022

- Used Cisco Modeling Labs to design, test, and configure WAN/LAN architecture
- Wrote automation scripts in Python and VBA to optimize workflow and organization
- Facilitated weekly build process meetings, providing shared notes resources, coordinated cross-team validation processes

Skills involved: Network Engineering · CML · Python · VBA · Jira · Teamcenter · Agile

Boeing · Electrical Engineering Intern

June 2019 - August 2019

- Utilized LabVIEW and various software to test electronic components in areas of performance, reliability, and quality in varying temperature environments
- Recorded and submitted information regarding electrical components for product development

Skills involved: LabVIEW · Component Testing · Data Analysis · Product Lifecycle Support

VOLUNTEER/LEADERSHIP EXPERIENCE

UC San Diego JSA · Web Developer & Staff

March 2023 - June 2024

- Designed and deployed flexible web features (e.g., user logins, dynamic galleries) using Firebase, Vue, and React, improving website usability for hundreds of students and club members
- Participated in club cultural event planning, volunteered at a local Japanese preschool, as well as led language table activities hosting 60+ participants weekly

Skills involved: HTML · CSS · JS · Firebase · Vue.js · React

PROJECTS

Jetson Nano Autonomous Vehicle

January 2023 - March 2023

- Prototyped and trained an autonomous vehicle to navigate dynamic tracks using reinforcement learning and behavior cloning

Skills involved: Python · OpenCV · Reinforcement Learning · Behavior Cloning · ROS2 · GPS/GNSS · Docker · Linux

Electronic Taiko Drum

September 2021 - December 2021

- Designed and implemented an Arduino-driven taiko drum that mapped piezoelectric feedback to custom digital output
- Enhanced sound fidelity by incorporating digital signal processing and analog-to-digital conversion techniques

Skills involved: Arduino · Digital Signal Processing · Fourier Transforms · Woodworking

SKILLS

Languages: C/C++ · Python · Ansible · MATLAB · LabVIEW · Verilog · SQL · Jinja2 · ReST

Technologies: Grafana · InfluxDB · Telegraf · CML · Wireshark · SuzieQ · LibreNMS · Docker · git · Jira · \LaTeX

Certifications: Security+ · Active TS/SCI Security Clearance

Spoken: English (Native) · Japanese (Professional Working Fluency) · Spanish (Basic)