

Kyle D. Mui

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Education

- **Cornell University, College of Engineering**
Bachelor of Science in Electrical and Computer Engineering, Graduation: December 2025
 - **Bronx High School of Science**, Class of 2022
 - **Relevant Courses:** Computer Architecture, Systems Programming, Microcontrollers, Embedded Systems, Digital Logic & Computer Organization, Circuits, Microelectronics, Data Science, Data Structures & Object Oriented Programming
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Experience

Cornell Mars Rover Project Team (Electrical Lead)

September 2023- Present

- Design and program multiple custom PCBs, each serving critical rover functions:
 - Servo Control Board: manage servo actuation for robotic subsystems
 - Power Distribution Board (PDB): regulates and distributes power across rover systems
 - BDC Motor Controller Board: controls brushed DC motors for precise movement
 - Spectrometer Interface Board: uses an LED to illuminate samples and a light sensor to collect data for analysis
- Write firmware in C for onboard microcontrollers, handling motor control, sensor inputs, and communication protocols
- Develop Python code to interface with boards, enabling higher-level control and rover software integration
- Integrate hardware and software via ROS for seamless communication across motors, sensors, and power systems
- Direct and mentor the electrical subteam in PCB design, soldering, and debugging, while collaborating with cross-functional leads for full rover integration at the University Rover Challenge (URC)
- Work with mechanical subteams to align electrical designs, ensuring smooth integration and reliable rover performance

R&T Deposit Solutions Summer Internship

July - August 2025

- Analyzed AWS client data, built Rego (OPA) policies to detect tagging/volume errors, and enforced compliance with the Firefly governance platform
- Designed and deployed GitHub workflows, extending existing ones for automation efficiency
- Created IAM roles in Terraform for secure access and migrated CI/CD pipelines from Jenkins to GitHub with automated scripts

Arista Networks Summer Internship

2021-2024

- Built Python scripts to efficiently transfer data between CloudBuilder and CloudVision Studio, and used them to construct scalable Spine-and-Leaf topologies
- Delivered reusable templates to colleagues, enabling efficient automation use cases
- Developed Python dashboards on CloudVision Studio to manage tags and visualize active device connections
- Edited Arista's PyAVD package to work with CloudVision Studio configurations
- Used Git to manage configurations on CloudVision, submitting pull requests to resolve issues
- Created a study plan to guide fellow interns in preparing for Arista L1 Certification

First Robotics Team: 1155 (Sciborgs) - Electrical Lead

2016-2022

- Led the design and assembly of robot electrical systems, including wiring, motor controllers, pneumatics, and sensors
 - Delegated tasks to subteam members and collaborated with mechanical/software leads on system integration
 - Mentored younger students in wiring, pneumatics, electrical troubleshooting, and competition readiness, ensuring long-term team success
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Certifications

- Arista ACE: L1 Certification
 - Networking fundamentals, switch configuration, VLANs, trunking, and troubleshooting in Arista EOS
- Cloud Quest: Cloud Practitioner
 - Hands-on with EC2, S3, VPC, RDS, IAM; applied security, compliance, and cost-optimization best practices
- Cloud Quest: Generative AI Practitioner
 - Built AI solutions with Bedrock, SageMaker, and foundation models; applied responsible AI practices

Volunteer Experience

Lifespire Bowling

September 2019 – 2022

- Supported individuals with disabilities in developing bowling techniques and social skills

East Meadow Challenger

April 2017 – 2022

- Assisted players with disabilities, including wheelchair users and those with autism, in practicing and playing baseball
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Relevant Skills

- Java, Python, C, C++, HTML, CSS, Javascript, Verilog, Git/Github, RISC-V, Rego, Terraform
- FPGA (Altera), Embedded OS, Microcontrollers, Kicad, Solidworks, PCB design, LTSpice