

Quang Minh Nguyen

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EDUCATION

University of California, Los Angeles (UCLA)

Expected Graduation: June 2027

- B.S. Electrical Engineering

GPA: 4.0

Relevant coursework: Systems and Signals (IP), Logic Design of Digital Systems (IP), C++ Programming, Java Programming, Circuit Theory I & Lab, Physics for Electrical Engineers (IP)

SKILLS

Hardware: Altium, KiCad, LTspice, Onshape (CAD), ESP32, Arduino, Raspberry Pi

Software: Python, C++, Java, Linux (Ubuntu), HTML/CSS (React), Node.js, Git, Microsoft Office Suite

Tool: Oscilloscope, Function Generator, Multimeter, Soldering, 3D Printing, Laser Cutter, Power Tools

Languages: English, Vietnamese

EXPERIENCE

Rocket Project at UCLA | *Electrical Engineer*

September 2025 - Present

- Attended introductory lectures, gaining knowledge on vehicle engineering, propulsion, electronics, & aerodynamics
- Will contribute to the design, manufacturing, & testing of the avionics and ground system on the Prometheus rocket

NASA L'SPACE Mission Concept Academy | *Command & Data Handling Engineer*

May 2025 - September 2025

- Designed CDH subsystem for a Mars rover that facilitates communication, manages operations, & controls data flow
- Created trade studies and Software Architecture flowchart to select 12 components, adhering to strict constraints
- Evaluated commercial, contractor, & in-house manufacturing options by balancing cost, risks, & lead time
- Developed robust Recovery and Redundancy plans to minimize damage and ensure immediate restoration of data
- Collaborated in a cross-functional team of more than 20 students from different disciplines
- Co-authored a 200+ page Preliminary Design Review (PDR) comprehensive report for the space mission

2025 UCLA Engineering HAcK Competition | *Electrical Engineer*

July 2025 - August 2025

- Spearheaded team of 4 in the design, prototype, and testing of two discreet wearable gadgets for a hackathon
- Developed 4+ circuit schematics using KiCAD and implemented them into fully functional physical systems
- Integrated sensors to precisely measure distance, temperature, humidity, and light level, with a live stream camera
- Programmed gadgets (Python) to be managed remotely by an IoT system, utilizing Digital I/O, I2C, & SPI protocols
- Managed real-time data transmission, enabling API calls to ChatGPT for advanced data analysis during testing phase
- Optimized system performance through calibrating and troubleshooting electrical issues within a 24-hour window

Tutoring Club | *Math and Science Tutor*

November 2024 - June 2025

- Tutored 100+ students on subjects like Calculus, Physics, Chemistry, Economics, & English
- Monitored student progress and provided detailed feedback, improving their grades by 20% on average
- Received positive feedback from 30+ students and parents for enthusiastic and innovative teaching methods

PERSONAL PROJECTS

Adjustable Linear DC Power Supply

August 2025

- Designed a linear DC lab bench power supply with adjustable voltage regulation from 0V to 20V, and operates using the standard American 120V AC outlet
- Conducted prototyping, calibration, and performance testing on the system before implementing on a PCB module

DC-DC Buck (Step-down) Converters

June 2025

- Designed, optimized, and assembled two DC-DC Buck (Step-down) Converter modules, 75V to 10V and 12V to 5V
- Researched 15+ data sheets of various COTS components from DigiKey for their specs and footprints
- Developed schematics and PCBs in KiCAD, manufactured the PCBs through JLCPCB, & assembled the modules

4 DoF Controllable Robotic Arm

June 2024

- Conceptualized, constructed, and programmed (C++) a Robotic Arm with 4 Degrees of Freedom using 3D printed parts, an Arduino UNO R3, and 4 potentiometers
- Resolved code and power supply issues with problem-solving skills, assembled the controller on a perfboard, researched cost-effective components, and utilized COTS fasteners