

Avrick Altmann

Contact: (818) 522-1159, avrickaltmann@yahoo.com Portfolio: <https://portfolio-github-io-blush.vercel.app/>

EDUCATION

Duke University

Aug 2024 - May 2028

B.S.E. in Electrical Engineering and Math

Durham, NC

- **Cumulative GPA:** 4.00/4.00 **Relevant Coursework:** Computer Architecture, Signal Integrity, Circuit Design
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WORK EXPERIENCE

Applied Invention

May 2025 - Aug 2025

Software Engineering Intern

Burbank, CA

- Led independent software / hardware projects for Fortune 500 companies as part of small robotics R&D team
- Designed PCB and injection-moldable IP65 enclosure in Fusion / KiCad for manufacturing at scale of ~1000
- Developed C++ motor driver and power distribution PCB for Ethernet/IP control with custom TCP/UDP packets

Nicholson / Loh Lab

Jan 2026 - Present

Undergraduate Researcher

Durham, NC

- Designing and Testing PCBs in KiCAD to support quantum computing and trapping Group III TriaI atoms
- Led design and manufacturing of analog current stabilization PCB for magnetic coil power with 0.1% fluctuation

Ganglion (Healthcare Startup)

Jan 2025 - Present

Founding Engineer, Hardware Designer

Durham, NC

- Leading design/manufacturing of the hardware/electrical components of a smartphone-based pupillometry device
- Iterating and testing bluetooth-compatible digital PCB with ESP32 light sensing / control for a 2026 clinical trial

Franklin Lab

Aug 2024 - Dec 2024

Undergraduate Researcher

Durham, NC

- Published paper in high impact journal analyzing hysteresis of CNT Transistors with different conductors
 - Designed, prepared, printed, and debugged 50+ transistors on 5nm Silicon wafers with oscilloscope / probe station
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ACTIVITIES / PROJECTS

Duke Robotics Club

Aug 2024 - Present

Head of Computer Vision

Durham, NC

- Lead 15 member software team to program an autonomous submarines, winning Finalist at Robosub Competition
- Debugging CV and Task-planning packages for 6DOF robot with Python / C++ in ROS Docker environment

Duke Game Development Club

Aug 2024 - Present

Events Chair

Durham, NC

- Organized the Triangle Game Jam, the biggest game development event in NC for 150+ people across 6 colleges
- Led creation of multiple games in Unity Engine using C#, winning 1st place at Duke Game Jam

Speak of the Devil A Capella

Aug 2024 - Present

Music Director

Durham, NC

- Direct rehearsals and performances at stadiums, restaurants, and retirement homes for 20-member singing group
- Arrange, edit, and record 5-part vocal arrangements for contemporary, pop, jazz, and classic a capella songs

Custom Analog Synthesizer

Jan 2025 - Feb 2025

Personal Project

Los Angeles, CA

- Designed, soldering, and debugged custom analog synthesizer for playing music
 - Generated pitched square waves, triangle waves, and sinusoidal waves modulated by an LFO and ADSR
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SKILLS / INTERESTS

- **Programming Languages:** Python (Numpy), C++ (ROS), C#, Javascript (ReactJS), UNIX/Linux Systems, C
- **Other Software:** Solidworks (CSWA Certification), Onshape, Git, Unity, Kicad, Matlab, Verilog
- **Tools Used:** Machine Shop Tools, Oscilloscope, Soldering, Arduino, Raspberry Pi, FPGA
- **Other Interests:** Puzzles, A Capella, Theater, Escape Rooms, Backpacking (Eagle Scout)