ELLIOT HAWKINS

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EDUCATION

Master of Science in Electrical Engineering and Computer Science; Electrical Engineering Emphasis **May 2027**
Fowler School of Engineering, Chapman University, Orange, CA
Bachelor of Science in Electrical Engineering; Minor: Music Technology **May 2026**
Fowler School of Engineering, Chapman University, Orange, CA 3.93 GPA

RELEVANT COURSES

Electronics and Circuits II | Control Systems | Electromagnetics I | Digital Logic Design II | Systems Programming
Engineering Mathematics | Microelectronics | Robotics | Digital Signals and Filters | Linear Algebra and Differential Equations

TECHNICAL SKILLS

Circuit Analysis | PCB Design and Fabrication | Python and C/C++ | Embedded Systems | Soldering | Laser Cutting | 3D Printing
Signal Processing | Arduino | 3D CAD | Project Management | MatLab | System Verilog | Waveform Analysis | Adobe Suite | CNC

EXPERIENCE

Student Makerspace Employee, (DCI Lab) | Chapman University **September 2022 - Present**

- Guided and supported student projects by providing expertise in:
  - PCB milling machines | Circuit analysis and testing | 3D printing and resin printing | Laser cutting | Soldering | Communication and organization | Poster and sticker printing | Wood and metal fabrication | Post-production | Project Management
- Developed and maintained comprehensive, streamlined instructions for equipment operation and sample project implementation
- Developed and directed hands-on interactive workshops in:
  - Laser Cutting (File set-up and process) | Soldering (Introduction to PCB soldering) | Introduction to 3D printing (printing process) | Introduction to Resin Printing (printing process)
  - Project workshops:
    - "Useless Machine" (Soldering, electronics, and laser cutting skills) | Anti-Gravity figure (3D modeling and printing)

Teacher's Assistant, Electromagnetics II (EENG-430) | Chapman University **Fall 2024**

- Modeled antennas using Ansys HFSS software for advanced electromagnetic field simulations
- Developed curriculum support materials to assist the professor in enhancing student learning
- Conducted office hours to provide personalized software assistance to students

Teacher's Assistant, Introduction to PCB design and Fabrication (CPSC-298) | Chapman University **Fall 2025**

- Guided students through PCB design and fabrication on LPKF tools: ProtoMat and ProtoLaser

PROJECTS

Remote Controlled Life-Sized Functional R2-D2 Replica from Star Wars (Robotics Club) **February-August 2025**

- Project lead and head of operations in all sub-groups
- Designed and fabricated custom PCBs for R2-D2's lighting systems with custom sequences on programmable integrated circuits
- Collaborated with teammates to fabricate a control system that integrated all R2-D2 functionality, including movement and sound
- Utilized Raspberry Pi's networking capabilities to fabricate a custom controller equipped with a user interface
- Gained problem-solving experience in every aspect of the project, including post-processing, electrical, and software areas

Cost-Efficient Solar-Powered Light Source For Developing Countries (Chapman Grand Challenge Initiative) **February - May 2024**

- Collaborated with one other student for the development of the product itself, main contributions were electronics and fabrication
- Designed and fabricated a solar-powered light source that performed equal to or greater than public products for a cheaper cost
- Utilized 3D CAD to model the product and all internal components, 3D print housing, and laser cut acrylic light diffuser
- Designed and fabricated custom in-house PCB with stencil to accurately place LEDs and resistors on PCB
- Distributed blueprints to a non-profit organization for future production and distribution to developing countries

"**Useless Machine" Workshop** (DCI workshop) **January - May 2024**

- Developed a machine to contact and engage a switch with a motor-controlled plank when initiated by the user
- Utilized electronic components that operated without requiring programming, microcontrollers, or Arduino-based systems
- Expanded knowledge of electronic housing, fabrication, engineering process with project management, and circuit development
- Streamlined the manufacturing process and facilitated workshops for students to assemble their own

ACHIEVEMENTS & ACTIVITIES

Chapman Robotics Club, **Secretary** Fall 2024 - Present
Society of Manufacturing Engineers, **Secretary** Spring 2025 - Present
Fowler School of Engineering Deans Scholarship, **Recipient** Fall 2022 - Present
Chapman University Provost List, **Member** Spring 2023, Spring 2024, Fall 2024
Chapman University Computer Science Club, **Member** Fall 2022 - Present
Chapman University Panther Game Development, **Member** Fall 2024 - Present
World Cube Association, **Staff Member, and Competitor** 2017 - Present