Aiden Kempista

aiden.kempista@gmail.com | Lincoln University, PA | 302-256-3329 | akempista.github.io

EDUCATION

University of Delaware Newark, DE
College of Engineering May 2025
Honors Bachelor of Electrical Engineering
Master's in Electrical and Computer Engineering (Expected May 2026)
GPA: 3.56
Relevant Coursework: Advanced PCB Design, Smart Grid, Image Processing and Deep Learning, Analog IC Design,

EXPERIENCE

University of Delaware Pearson Hall Makerspace Newark, DE
Lab Assistant August 2021 - Present

- Fabricate and design components to improve the UX of the space.
- Ensure users follow safe operating procedures.
- Provide consultation to users of the space in order to overcome design challenges.
- Facilitate the use of fabrication technology such as laser cutters, 3D printers, table saws, and sanders.
- Understand and apply the proper operating procedure for multiple fabrication technologies.

University of Delaware Summer Scholars Newark, DE
Undergraduate Researcher June 2023 - August 2023

- Designed a PCB to reduce the footprint of the device and improve the speed and ease of development.
- Developed an auditory recording program in C++ using the Arduino IDE.
- Implemented the Teensy 4.1 MCU and audio board to improve analog reading speed and quantity.
- Developed a Python script to analyze .wav files by splitting the left and right channels into separate files with spectrograms.

Sparks Lab UDEL Newark, DE
Intern June 2024 - August 2024

- Redesigned a field device to increase measurement range without increasing cost.
- Designed weather-resistant electronic housings using CAD and 3D printing.
- Implemented Bluetooth functionality for controlling field devices remotely.
- Reduced the volume taken up by electronics by 80%.

PROJECTS (Portfolio at akempista.github.io)

ESP32 Drone:

- Created schematics for an ESP32 S3 powered drone with a built-in camera and battery charging system.
- Designed a custom PCB layout to optimize space and weight.
- Helped integrate the drone hardware and software to allow for live object recognition.

Fully Modular Keyboard:

- Created schematics for key switches, an STM32 microcontroller, and an integrated USB 2.0 hub.
- Designed PCB in KiCAD 8 and routed USB 2.0 data lines with impedance matching.
- Designed a modular connection standard for external modules and easy additional design.
- Used Fusion360 to model a custom case and aluminum plate.

SKILLS

- Programming Languages: Python, C, C++, VHDL
- Fabrication Technologies: Laser Cutting, 3D Printing, Soldering
- Tools: Fusion 360, KiCad, Altium Designer, LTspice, Arduino, Adobe Illustrator, Affinity Designer, Vivado

INTERESTS & HOBBIES

- Graphic Design
- Game Development
- Music Production
- Longboarding
- Digital Art
- Hiking