

*I am creative, curious, and passionate about designing products that merge technical precision with human-centered creativity. Experienced in prototyping mechanical and electronic systems, learning through iteration, and collaborating across disciplines to bring ideas from concept to reality.*

## Education

### Duke University, Durham NC

*Expected graduation: May 2028*

**BS.** Mechanical Engineering; **Minors:** Computer Science, Visual Arts; **GPA:** 3.689

- **Relevant Coursework:** Product Design, Engineering Design and Communication, Engineering Innovation, Mechanics of Solids, Dynamics, Mechatronics, Physics I & II, Linear Algebra, Multivariable Calculus Data Structures & Algorithms, Computer Architecture, Computing for Engineers, Economic Principles, Product Management, Intermediate Sculpting

### Pelham Memorial High School, Pelham NY

*2020-2024*

- **Activities & Honors :** 4 years elected Class President, President Science National Honor Society, Field Hockey captain

## Projects

### WavGuard, Duke ME490 Elective

*Aug 2025- Present*

- **Designing a smart wakeboard** embedded system that processes sensor data on pressure and board tilt to optimize rider stance in real time. Implemented LED feedback that adapts to riding conditions using a coded algorithm to guide beginners and reduce falls.
- Collaborating with a cross-disciplinary team of four Duke undergraduate engineers and four Masters of Engineering Management graduate students to design a solution to the issue topic “*Extreme Outdoors*”.

### Nyakuza Suspended Footbridge, Engineers in Action

*May- Aug 2025*

- Collaborated with students from Duke University, McGill University, and Engineers in Action nonprofit to designed a **128-meter Suspended Footbridge**, now the longest pedestrian bridge in Eswatini, Africa.
- Lived on a homestead in Eswatini for 8 weeks to construct the bridge alongside 14 students, 3 masons, and community members; served as Quality Control Manager to ensure precision and durability in each step of the build, and contributed to review calls and technical reports on bridge design, progress, and completion.

### Automated Reptile Feeding Device, North Carolina Zoo

*Aug- Dec 2025*

- Partnered with zookeepers to design a feeding system that mimics natural reptile hunting behaviors.
- **Developed a gravity-based live-feed dispenser** that releases live crickets at random intervals, reducing feeding predictability to mimic natural feeding habits (with refillable, easy-to-clean, and camouflaged design for seamless integration into enclosures). Project currently being utilized in the Zoo’s ‘Desert Dome’ reptile exhibit.

### Piezoelectric “Self-Charging” Computer Keys, Independent Research

*May 2022- May 2024*

- Conducted independent research on piezoelectric energy harvesting through literature review and outreach to field experts
- **Designed and prototyped two piezoelectric keyboards** that convert keystroke energy into electricity to recharge devices; acquired a provisional patent on the second prototype.
- Twice qualified for the Regeneron International Science and Engineering Fair (ISEF), earning 4th place in *Energy: Sustainable Materials and Design* and recognition awards from the U.S. Air Force Research Laboratory and Patent Office

## Extracurricular Experience

### Product Manager and Engineering Design Team, Gladiator Allegiance

*Oct 2025-Present*

- Hired as product manager to lead team conducting user research to identify needs, pain points, and behaviors that inform product direction. Shaping research strategy to guide design decisions in line with patent outline and interviewee input in order to develop a minimal viable prototype by May (further details under NDA).

### Apple Next Gen Innovator Program

*Sept 2025-Present*

- Gaining direct guidance from Apple engineers and exposure to real-world product design and engineering practices.

### Product Management Fellowship, Product @ Duke

*Sept 2025-Present*

- Selected for a one-year fellowship to network with product managers in industry and manage projects on campus

### Industry Night Committee, Duke Society of Women Engineers (SWE)

*Jan 2025-Present*

- Organized a networking event for 200+ SWE members and 12 visiting engineering companies (ex. SpaceX, Striker)

### Pelham Engineering Clinic, Pelham Union Free School District

*Aug 2023-Present*

- Founded/ designed a curriculum for a free after school hands on engineering clinic targeting 3rd-5th grade students to increase STEM participation in my school district, instituted program funding with school board, mentoring volunteers

**Other Activities:** Duke Engineers for International Development, Duke Energy Club, Duke Society of Women Engineers, Theta Tau Engineering Fraternity (Treasurer), Club Field Hockey

## Skill Sets

**Technical:** Arduino, C, CAD: SolidWorks, Circuitry, Data Acquisition, Java, Laser Cutting, Python, Tolerance Analysis;

**Creative:** Adobe Illustrator, Photoshop, Rapid Prototyping, Visual artistry;

**Communicative:** PowerPoint, Presentational Speaking, Product Management, Storyboarding, Technical Writing