

FELIX WANG

8 Hotz Rd, Lincolnshire, IL 60069 | (847) 508-3767 | felix.wang@duke.edu

EDUCATION

Duke University Pratt School of Engineering

Expected May 2028

B.S.E. in Electrical and Computer Engineering | B.S. in Physics | Certificate in Entrepreneurship

Durham, NC

- **Honors/Programs:** Duke Motorsports (Electrics Division), Duke Club Swimming, Duke Quantitative Finance
- **Relevant Coursework:** Energy & Climate Entrepreneurship, Linear Algebra, Data Structures & Algorithms, Multivariable Calc

Adlai E. Stevenson High School

Aug 2020 – May 2024

Summa Cum Laude

Lincolnshire, IL

- **GPA:** 4.85/4.00 | **SAT:** 1560 (Math: 800, Reading: 760)
- **Honors:** USAPHO Qualifier, USACO Gold, National Merit Semifinalist, 2021 IHSA Boys Swim/Dive State Champions

WORK EXPERIENCE

REU for Center for Interdisciplinary Research in Astrophysics, Northwestern University

June 2025 – July 2025

Researcher

Evanston, IL

- Applied AstroPy, HEALPix, and LightKurve coding packages for astrophysical data analysis; \$2500 scholarship
- Performed energy studies from accreting black holes, using Astropy for wavelength imaging and time-series analysis on light behavior
- Processed 10,000+ planetary candidates from Exoplanet.org using Pandas and NumPy, deleting NAN values, data normalization/restructuring
- Wrote scientific paper analyzing TESS database data for exoplanet candidates, identifying potential habitable exoplanets

Stellarverse

May 2022 – Present

Founder and Head of Operations

Buffalo Grove, IL

- Managed team of 12 for Non-profit organization that hosts community star-gazing sessions, online classes, and astrophotography lessons
- Raised \$2500 for The Planetary Society through classes & events and to fund telescopes for Lake County Astronomical Society
- Developed the Stellarverse website and integrated Stripe payment APIs to process donations and class registrations
- Built an event registration and participant database system to track attendance and manage community engagement across programs

Patriot Aquatics Club

May 2021 – July 2025

Swim Instructor Lead

Lincolnshire, IL

- Trained and onboarded 50+ new swim instructors, overseeing lessons plans, and led placement tests for 8 levels
- Organized 120+ private swim lessons across age groups, developing tailored training plans that improved swimmer performance and passion

LEADERSHIP & EXTRACURRICULAR INVOLVEMENT

Duke University Motorsports

August 2025– Present

Electrical Team

Durham, NC

- Designed and built a 3 kW motor controller that improved vehicle efficiency by about 6%, helped assemble custom battery packs and PCBs
- Used Altium Designer and OnShape to create and test circuit board layouts for high-current motor control systems
- Built a photogate timing system using laser sensors to accurately measure vehicle speed and run times

Duke Engineers for International Development

August 2025 – Present

Project Member

Kampala, Uganda

- Designed a low-cost (< \$30 USD) monitoring system on ArduinoUno to alert nurses of infant nasal cannula dislodgement using thermistors
- Established design benchmarks including 95% detection accuracy, 1–3 min alert response, and under 5 min setup time for ease of integration
- Collaborated w/Uganda clinicians to optimize system architecture, response speed, reusability, for deployment in low-resource medical settings

Gabrielse Group, Northwestern University

June 2024 – July 2024

Researcher

Evanston, IL

- Constructed photogates and beam shapers for UV laser systems, supporting experiments that optimized particle detection
- Analyzed radio frequencies to study electron spin in magnetic fields, and organized lab by building cabinets and shelving tools
- Assisted in calibration and alignment of electron beam steering and magnetic field control systems

PROJECTS

Mycospec – building a first-of-a-kind handheld fungal detector with IOS/Android app integration

Dec 2025 – Present

Lead Electrical Engineer

Durham, NC

- Utilizing 8 gas sensors, 1 temperature/humidity sensor to poll volatile organic compounds (VOCs) in environments, hosted on an ESP32
- Integrating sensor data with a ML model to predict what “mold” smells like, and using predictions to determine species of mold to alert user
- Building a full-stack app using React and Node.js to correspond with ML model and generated confidence metrics
- Utilized Google Sheets API to create a real-time data collection from ESP32, which then transfers into ML model in app

HiFive – Full-stack app software aiming to provide a medium converting social acquaintance into genuine friends

March 2025 – Present

- Developed a real-time messaging app from scratch with Node.js/Express and Socket.IO; integrated PostgreSQL for backend data storage
- Designed a prompt pipeline w/Gemini 2.5 Flash API for context-aware icebreaker questions, specifically connecting users with varied hobbies

SKILLS AND INTERESTS

- **Skills/Certifications:** Mandarin, Java, Python, Arduino, Circuit analysis, prototyping
- **Interests:** Swimming (Butterfly), Podcasting, Chicago Bears, Smoothies, Pickleball, Climate Tech/Space