Mirabel Luo

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Career Objective

Computer engineering student at Johns Hopkins University with a strong foundation in data structures and embedded systems. Eager to apply my technical skills and problem-solving mindset in a dynamic, fast-paced environment. Looking for a summer internship (May–August) where I can contribute to impactful projects at the intersection of technology and finance.

Education

Johns Hopkins University Baltimore, MD

B.S. *Computer Engineering*, 2023-2027 (Expected)

- Cumulative GPA: 3.98
- Coursework: Data Structures, Intro to VLSI, Signals and Systems, Computational Modelling for ECE, Digital Systems Fundamentals, Computer Architecture, Mastering Electronics, Discrete Mathematics, Calculus III
- Leadership: Blue Key Society (Ambassador), JHU Wind Energy Team (VP), Society of Women Engineers

Skills

Technical: Java, C, C++, x86-64, Python, Git, MATLAB, Jupyter, Cadence, PCB Design, Microcontrollers, Analog/Digital Circuits, Linux/Unix, Hardware Debugging, Semiconductor Physics, IC Design

Experience

Lundquist Research Group – Johns Hopkins University Baltimore, MD

Undergraduate Researcher September 2024 – Present

- Analyzed onshore/offshore atmospheric differences using **big data** and **predictive modeling** and currently authoring a research paper based on this work.
- Leveraged Python visualization tools (**NumPy, pandas, and Matplotlib**) on **multi-year climate datasets**.
- Converted **raw attenuated backscatter data** from **LiDAR sensors** into accessible and analyzable formats.
- Prepared technical reports to aid DOE and NREL in **turbine energy system optimization**.

Hopkins Wind Energy Team Baltimore, MD

Vice President & Electronics Lead September 2024 – Present

- Leading testing and prototyping phase with **real-time sensor data** to ensure system reliability.
- Designed and implemented a **MOSFET-driven** turbine safety system, optimized for a **50W power rating**
- Achieved **30% reduction** in energy, enabling faster system operation and **lower current requirements**.

Levy, Firestone, Muse LLP Washington, DC

Investigative Intern June 2024 – August 2024

- Developed a **Python-based data-scraping tool** to organize relevant case data streamline the firm's investigation process.
- Conducted **case research** on high-profile civil and criminal cases, specializing in international and tort law.
- Drafted internal memos and client-facing documents on complex legal issues, presenting findings to senior partners.

Professor Pamela Cosman's Lab – UCSD San Diego, CA and Remote

Research Intern June 2022 – March 2024

- Co-authored a peer-reviewed study on **ML assistive technology** for neurodivergent adults. "Behavioral Intervention for Adults With Autism on Distribution of Attention in Triadic Conversations: An A/B-Tested Pre-Post Study." *Journal of Medical Internet Research*, vol. 25, no. 4, 2023.

U.S. Citizen