BETH LINDENBAUM

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EDUCATION

Duke University – Pratt School of Engineering **August 2023 – May 2027**
Double Major - *B.S.E. Electrical & Computer Engineering and Computer Science* | GPA: 3.73/4.0 Durham, NC

Relevant Coursework: Data Structures & Algorithms, Computer Architecture, Digital Systems, Microelectronic Devices & Circuits, Signals & Systems, Linear Algebra, Multivariable Calculus, Probability, Differential Equations, Chemistry, Physics, Biology

Extracurriculars: Women's Club Basketball Executive Committee, Duke Jewish Student Union Executive Committee, Duke Technology Scholars (DTech), Society of Women Engineers, Jewish Service Club Vice President

Awards: 2023 & 2024 Kevin Gorter Memorial Scholarship, DTech Scholar

Clearview Regional High School **September 2019 – June 2023**
Valedictorian – Rank 1/364 | GPA: 101.30/100 Mullica Hill, NJ

WORK EXPERIENCE

Embedded Linux Software Engineer Intern **June 2025 – August 2025**
Schneider Electric Raleigh, NC

- Develop a fully automated testing device using an ESP32 microcontroller to simulate BLE client behavior, Zigbee relay communication, and Wi-Fi messaging for Schneider's Energy Monitor system
- Program in C to test interactions between the Energy Monitor, iOS app, and home circuit breakers; collaborate with firmware written in Python and Rust to validate multi-protocol communication reliability

Teaching Assistant – Computer Architecture (COMPSCI 250) **January 2025 – May 2025**
Duke University Durham, NC

- Led weekly recitation sections and office hours. Provided individualized instruction to students, clarifying complex concepts and troubleshooting technical challenges. Collaborated with the professor and other TA's to ensure consistency in curriculum delivery
- Graded and assessed student projects and exams in a timely manner, providing valuable feedback for student development

PROJECTS

Pac-Man **Spring 2025**

- Built a Pac-Man arcade game on FPGA using Verilog, MIPS assembly and a custom processor; displayed on VGA and joystick-controlled
- Integrated Verilog modules and assembly code via register-mapped I/O to track scoring, lives, and game state resets
- Designed FSMs for sprite movement, collision detection, animations, a high score system, and game reset logic (win/loss conditions)

Audio-visual Notification System for Drone Delivery **Fall 2023 – Spring 2025**

- Designed, programmed and assembled an automatically activated and deactivated device, that simultaneously flashes multicolored LED lights and outputs a range of tones with Arduino IDE and microcontrollers
- Led a presentation of our product at Rural PRO-CARE Health Equity Research Network Annual Meeting 2024
- Obtaining patent protection for our product

Cache Simulator (Java) **Fall 2024**

- Coded a simulation of data transfer between CPU, memory, and caches, implemented write-back and write-allocate specifications for L1 cache

LEADERSHIP EXPERIENCE

Duke Jewish Student Union Executive Committee – Communications Chair **Spring 2024 – Spring 2025**

- Manage community outreach to the 700+ Jewish students at Duke University through email and social media
- Document weekly meeting minutes and distribute action items. Design graphics for Duke Jewish Student Union social media and merch

Duke Women's Club Basketball Executive Committee – Social Chair **Spring 2024 – Spring 2025**

- Manage social calendar and plan, host, and monitor events for 55+ club members. Promote relationships with other campus organizations
- 2023 & 2024 Kevin Gorter Memorial Scholarship: Awarded for leadership and involvement in the Duke University Sport Club Program

Duke Technology Scholars (DTech) Leadership Team – Vice President of PrepTogether Program **January 2025 – March 2025**

- Led PrepTogether, a summer initiative supporting underclassman women in tech by building interview readiness, industry skills, and confidence

TECHNICAL SKILLS

Languages: Java, Python, C, C++, Verilog, Assembly, MIPS, Swift, SwiftUI, HTML, CSS, JavaScript, Rust, LaTeX, Visual Basic
Technologies: FPGA, Microcontrollers, Arduino, MATLAB, Simulink, Linux, MacOS, Git, Bluetooth, BLE, Zigbee, Wifi, Microsoft Office
Other Skills: Firmware, Machine Learning, Scikit-learn, NumPy, Pandas, FastAPI, React, Bash, Valgrind, gdb, Circuit Design, Debugging, Soldering

CERTIFICATIONS

- **Andrew Ng Supervised Machine Learning: Regression and Classification Course** – DeepLearning.AI/Stanford Online