

Evan Smith

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Education

Worcester Polytechnic Institute

Master of Science, Electrical and Computer Engineering, GPA: 4.00/4.00

May 2026

Bachelor of Science, Computer Science & Electrical and Computer Engineering, GPA: 4.00/4.00

May 2026

Skills

Languages: Python, Java, C, SystemVerilog, SQL

Libraries: PyTorch, Transformers, NumPy, Pandas, SciPy, Matplotlib, Seaborn, PyQt5

Software: Altium, Git, Cadence, Jupyter

Experience

Cyber Research Intern | Peraton Labs, Bedford NH

June 2025 – August 2025

- Developed a Python package to analyze underwater hydrophone audio, saving over 95% of manual annotation time.
- Built an end-to-end machine learning pipeline leveraging embeddings, few-shot learning, and Earth Mover's Distance to classify and detect arbitrary new audio events.
- Designed and implemented a PyQt5 GUI for real-time visualization and interaction with the pipeline.

Electrical Engineering Teaching Assistant | WPI, Worcester MA

March 2024 – Dec 2024

- Taught and mentored over 100 students in introductory circuits, assisting with labs, troubleshooting, and equipment.
- Lectured on theory of phasors for AC signals.

Undergraduate Research Assistant | Jacob Whitehill Research Group, Remote

May 2024 – June 2024

- Developed particle simulation in Java and analysis tools in Python to optimize placement of obstacles.
- Analyzed Bayesian Optimization against random grid search across kernels.

Sound Engineering Summer Intern, Main Street Music Studios, Brewer ME

June 2023 – August 2023

- Collaborated with clients to produce high-quality recordings and mixes, assisting in setup and instrument management.

Projects

Coronal Hole Classification | WPI, Independent Study Project

October 2024 – March 2025

- Developed CHASM tool and new dataset (1,400+ days of data) using a SAM-based approach and trained a U-Net based machine learning model, increasing IoU performance by over 15%.
- Provides a more accurate dataset and model for future analysis of the behavior of the sun.
- Awarded Honorable Mention for Computer Science Major Qualifying Project, placing top 3 in the department.

Mode Collapse with Kolmogorov Arnold Networks | WPI, Generative AI

March 2025 – April 2025

- Implemented novel Kolmogorov Arnold Network (KAN) in PyTorch to evaluate efficacy of these layers in preventing mode collapse in Generative Adversarial Networks (GANs) for image generation.
- Evaluated vanilla and Wasserstein GAN variants quantitatively and qualitatively on MNIST and CIFAR-10 to evaluate improvement of KANs for image generation.

Talking LLaMa | WPI, On Device Deep Learning

March 2025 – April 2025

- Designed a real time image to spoken poetry model on Raspberry Pi 5, utilizing pruned large language model, vision transformer, and text to speech models.
- Finetuned LLaMA on haiku dataset to produce poetry based on image input.

Bananagrams Solver | Personal Project

December 2023 – February 2024

- Built a heuristic solver in Java using a custom modified A* algorithm to complete Bananagrams board game in seconds.

Organizations

President | Upsilon Pi Epsilon Massachusetts Alpha Chapter

Jan 2025 – Present

Electrical Lead | Autonomous Underwater Vehicle Club

Jan 2025 – Present

- Leading design of 10 students for implementation of the electrical systems in Altium, managing objectives and organization.

Treasurer | Eta Kappa Nu Gamma Delta Chapter

Mar 2024 – Present

Electronics Design Team | High Powered Rocketry Club

Oct 2023 – Present

- Designed PCB and telemetry systems for a high-powered rocket, focusing on STM32 microcontroller, XBee radio.