Hersch Nathan

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"To innovate the final frontier"

EDUCATION

University of Kentucky — Lexington, Kentucky
Bachelor of Science in Electrical Engineering — Expected Graduation: May 2026
Bachelor of Arts in Theatre — GPA: 3.8
Minor in Mathematics

Chellgren Student Fellow, 2023-2024 Cohort
- Program to cultivate extraordinary academic achievement through research

Otis A. Singletary Scholar, 2026 Cohort
- Prestigious competitive full ride scholarship offered by University of Kentucky about service and high achievement

Relevant Coursework: Topics in EE: Intro to Robotics, AC Circuits, Intro to Embedded Systems, Differential Equations, Scenic Design

SKILLS

Coding Languages/Hardware Description Languages: MATLAB, C++ , C, Python, Verilog
Libraries and Frameworks: libmodal_pipe , ROS 1, ROS 2,
Development Boards: Arduino, Raspberry Pi Pico, Raspberry Pi (assorted), Nvidia Jetson Nano
CAD/EDA: Fusion360, Onshape, EasyEda
Office365/Google Workspace: Word, Excel, Docs, Sheets
Fabrication: Woodworking, Metalworking, Sewing, Fabrics, Carbon Fiber
Amateur Radio: Technician License (Call sign KD9POY - Completed June 2020)

EXPERIENCE

SpaceLex, *Project Manager of Active Control Research and Controls Specialist* — Lexington, Kentucky
- Team Lead — September 2022-Present
- Developed a Simulink Simulation for rocket controls
- Designed electronics for rocket avionics and payload rover 'RIQ'

University of Maryland Baltimore County, *NSF-REU Undergraduate Researcher* — Baltimore, Maryland
- Develop algorithms to send images via Wi-Fi & LoRaWAN to reduce computation time/power — June 2023- August 2023
- Deploying and benchmarking Modal AI Sentinel with ROS into an asynchronous heterogeneous network
- Hosted by Mobile, Pervasive and Sensor Computing Lab in Department of Information Systems

University of Kentucky, *Electrical and Computer Engineering Undergrad Research Fellow* — Lexington, Kentucky
- Researching an approach for robotics pathfinding through hybridization of existing algorithms — January 2023-Present
- Interdisciplinary between Electrical Engineering and Theatre Arts mentored by Dr. Biyun Xie

Amateur Radio Club (HamCats), *President ('23) and Vice President ('23-'24)* — Lexington, Kentucky
- Lead the club and provide vision for the future of the club — January 2023-Present
- Educating club members on use/operation of HAM radios to obtain their licenses

Summer Stock Stage, *Technical Intern ('21) and Technical and Lighting Assistant ('22)* — Indianapolis, Indiana
- Constructed/painted sets, rigged/focused lights, deployed sound systems — Summer 2021 and Summer 2022
- Operated sound, spotlights, flying scenery, and flying a person during shows

INVOLVEMENT

Institute of Electrical and Electronics Engineers, *Member* — 2023-Present
STEMgiQueers, *Engineering Student Council Representative/Member* — 2022-Present
Alpha Phi Omega - Alpha Zeta Chapter, *Brother* - Initiated November 2022 — 2022-Present
Studio Season, *Lighting Designer* — 2022-Present
Puppeteers of America, *Puppeteer/Member* — 2017-Present

AWARDS

Dean's List – College of Engineering, Fall 2022 – Spring 2022 — University of Kentucky
Alpha Delta Lambda – Honor Society, Inducted Spring 2022 — University of Kentucky