Katherine Pesetski

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Washington DC-Baltimore Area

EDUCATION

Purdue University **Expected Graduation: May, 2027**

B.S. in Electrical Engineering, John Martinson Honors College
Cumulative GPA: 3.76/4.0
Relevant Courses: Calculus I-III, Linear Algebra, Differential Calculus, Electrical Engineering Fundamentals, Electricity and Magnetism, Python for Data Science, Programming in C

McDonogh School **August, 2013 - June, 2024**

Cumulative Weighted GPA: 4.5/5.0
Cum Laude (Top 10% of Class), 4 years on Dean's List, Commended National Merit Scholar

EXPERIENCE

Purdue Wang Thin Film Group, Undergraduate Research Assistant **May, 2025 - Current**

- Worked on designing and developing a robotic arm to help with improving the efficiency and accuracy of thin film circuit tests
- Part of my Honors College Scholarly Project
- Selected to present my findings at Purdue's Spring Undergraduate Research Conference (Spring 2026)

Northrop Grumman, College Technical Intern **June, 2025 - August, 2025**

- Researched the viability of new low pass filter boards used in testing with LTSpice schematics and Bode plots and analyzed the performance of them using JMP
- Learned basics of designing analog quantum circuits using Cadence Virtuoso and Ansys
- Debugged and ran Python scripts for testing cryogenic superconducting devices used for quantum computing qubits and reciprocal quantum logic
- Presented to Process Control Module Testing team and upper management on findings that will increase accuracy of future testing

Purdue Professor Guang Lin, Undergraduate Research Assistant **January, 2025 - May, 2025**

- Created a data cleaning algorithm to increase efficiency in processing a 1200 column spreadsheet of vitals for over 80 patients with muscular dystrophy
- Classified left ventricular end diastolic and systolic volume as two critical vitals in determining the severity of muscular dystrophy using Python Support Vector Machine algorithm
- Presented poster at the Purdue Undergraduate Research Symposium

INVOLVEMENT & LEADERSHIP

HonorServes, Co-Chair of NICHES Committee **August, 2025 - Current**

- Co-leader of sub-committee within HonorServes, a Honors College club focused on community engagement
- Work with partner organization, NICHES Land Trust, to run and facilitate fundraisers and volunteering opportunities geared at their mission of protecting the natural resources and land in West Central Indiana

IEEE Engineering in Medical and Biology Society (EMBS), Secretary **August, 2025 - Current**

- Support research efforts focused on revolutionizing the future of medicine and healthcare
- Coordinate weekly meetings, facilitate communication between members and leadership, and maintain club website to ensure smooth organization operations
- Contribute to the hardware team by designing PCB boards and wiring devices for an Alzheimer's Tri-Modal Home Kit aimed at accessible early disease detection based on tremors, eye movement, and speech changes

AWARDS & CERTIFICATIONS

Qualcomm Inclusion Scholarship **July, 2025**

Northrop Grumman Scholarship **August, 2024**

First Time Researcher (FTR) Fellowship **December, 2024**
Purdue Engineering Undergraduate Research Office

Lockheed Martin CodeQuest **April, 2023**
1st Place Winner

SKILLS

Python, Java, JavaScript, C, MATLAB
Arduino, CAD, Raspberry Pi, LTSpice, JMP, Cadence Virtuoso, Ansys, PCB Design
Chinese (Conversational)