

Ben Pekarek

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EDUCATION

Stanford University, *Master of Science in Electrical Engineering, 4.0 GPA* April 2026

Coursework: Robot Perception, Sensing Systems, Sensorimotor Robot Learning, RL, Convex Optimization

Purdue University, *Bachelor of Science in Electrical Engineering, Minor in Spanish, 4.0 GPA* May 2024

Coursework: Circuits, Controls, Electromagnetics, Power Electronics

RESEARCH

Stanford University, *Robotics and Embodied Artificial Intelligence Lab* March 2025 – present

- Co-authored RSS 2026 submission on single-shot robot policy adaptation via behavior prompts
- Implemented and trained diffusion-based visuomotor policies in PyTorch; iterated policy architecture, data collection strategy, and data augmentations to improve performance
- Built software to autonomously collect procedural drawing data in real-world on ARX robot

Purdue University, *Wireless EV Charging Infrastructure Researcher* January 2023 – May 2024

- Designed complete control system architecture for 230 kW inverters used to charge moving vehicles
- Implemented and validated inverter software on TI microcontroller to enable detection and charging of vehicles
- Created and verified high voltage hardware setups for testing gate-drivers, inverter, and power transmitter
- Communicated power transmitter building procedures to construction contractors

WORK EXPERIENCE

Krach Institute for Tech Diplomacy, *Policy and Technology Fellow* June 2025 – September 2025

- Explained technical concepts such as 5G, semiconductor manufacturing, and AI to non-technical decision makers
- Wrote policy briefings on international tech landscape and current standards for use in diplomatic engagements

John Deere, *Electric Drive Controls Intern* May 2022 – August 2022

- Designed and validated automatic braking vehicle controls in MATLAB/Simulink, enabling savings of \$6000 per vehicle manufactured by leveraging hardware already on-vehicle
- Engineered and supervised integration of low voltage electrical harness for battery subsystem charge testing

John Deere, *Embedded Software Intern* May 2021 – August 2021

- Built simulator for vehicle software in Visual Studio/C++, allowing software development to progress without a physical prototype ultimately saving 80 engineer-hours per year

LEADERSHIP & TEACHING

Stanford University, *Teaching Assistant: EE/CS 227: Robot Perception* September 2025 – present

- Held weekly office hours and developed both coding and written assignments on convolutional neural networks, object recognition, and end-to-end pick and place systems in robosuite

Sant Cugat FC España, *Camp Counselor / Youth Soccer Coach* June 2024 – July 2024

- Lived and worked abroad, coaching youth sports entirely in Spanish at Catalanian soccer camp

Purdue Engineering Student Council, *President* January 2022 – December 2023

- Elected to lead 40-member organization supporting 12,000+ students with 35 annual events
- Led team of 7 students to operate largest student-run career fair in the USA (430 companies, 12,000 attendees)
- Wrote memo to university leadership that reformed payment processing for 1,000+ student organizations
- Collaborated with legal, technical, and administrative teams to implement memo, reducing credit card transaction fee from 15% to 6% for student clubs