STEVEN PEREANU

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EDUCATION

University of Michigan, Ann Arbor **Ann Arbor, MI**
Bachelor of Science in Engineering (BSE) in Electrical Engineering
Expected graduation: May 2026
GPA: 4.00/4.00
Honors: Dean List (12/31/23, 4/30/24), University Honors (5/2/24)

WORK EXPERIENCE

Indiana University – Purdue University Indianapolis (IUPUI) **Indianapolis, IN**
Army Educational Outreach Program (AEOP) Apprenticeship *June 2023 – July 2023*
- Designed 3D models for ceramic 3D printing, applying CAD software to develop precise and efficient prototypes, which enhanced the accuracy of the manufacturing process and reduced material waste.
- Leveraged a Speaker Series to gain insights on additive manufacturing, improved project outcomes.

MIT Beaver Works Summer Institute (BWSI) **Cambridge, MA**
Summer internship *June 2022 – July 2022*
- Led a team of five to create an outbreak simulation tool for scenario analysis and management, coordinating efforts and delegating tasks to leverage each team member's strengths, that resulted in greater strategic planning.
- Engineered Q- and Deep Q-Learning algorithms in TensorFlow, applying advanced machine learning techniques to optimize decision-making processes, significantly reducing simulated casualties.
- Refactored code to improve efficiency and consistency across teams, while reducing technical debt.
- Analyzed results and generated graphs to refine management strategies, using data visualization to communicate key findings, which enabled more informed decision-making and enhanced the tool's practical application.

University of California, San Diego **San Diego, CA**
Summer internship *June 2022 – August 2022*
- Designed and implemented a machine-learning workflow to aid in new therapeutic discovery, integrating data from biological datasets to identify potential drug candidates, which improved the accuracy of predictions.
- Performed lab work including lysis, PCR, transformation, culture, and purification to validate results from the machine-learning model, ensuring the reliability of the findings.

PROJECT EXPERIENCE

ArduPilot-based Autonomous Quadcopter Drone
- Designed control system integrating LIDAR to enable autonomous navigation.
- Programmed sensor-driven flight algorithms using Python and C++, achieving sub-second response times.

PCB Business Card
- Designed and assembled a custom PCB with an ATTiny85 and OLED display to create a business card that doubles as a video game console, demonstrating proficiency in circuit design and microcontroller programming.
- Programmed and debugged firmware using Arduino IDE to optimize performance for game applications, ensuring efficient power usage and responsive controls, which enhanced the user experience and device reliability.

SKILLS

General Software	Microsoft Office, Google Workspace
Machine Learning	Q-Learning, Deep Q-Learning, Random Forest, TensorFlow, Gym
Programming	Python, C++, Java, MATLAB, R, VHDL, Verilog
Electrical	PCB design, EasyEDA, Circuit simulation, FPGA programming, WaveForms
Laboratory Skills	PCR, Cell transformation, Bacterial culture, Protein purification

ACTIVITIES

Autonomous Robotic Vehicle Team, Member *August 2024 – Present*
UM::Autonomy, Member *August 2023 – Present*
Michigan Esports, Member *August 2023 – Present*