Luke Brzozowski

+1 (313) 949 6768 | lbrzozow@umich.edu | portfolio | linkedin | Belleville, MI 48111

Result-driven with 2+ years experience, seeking positions in Software Engineering or Embedded Systems.

EDUCATION

The University of Michigan - Ann Arbor | *Bachelor of Science in Engineering in Computer Engineering*   Dec 2025

Courses: Computer Vision, Computer Security, Computational Linear Algebra, Data Structures and Algorithms, Computer Architecture, Embedded System Design, Embedded Control, Signals and Systems, Digital Logic Design

EXPERIENCE

Robert Bosch, *Systems Engineering Intern* | Plymouth, MI   May 2024 – Jan 2025

- Led development of voice-activated Advanced Driver Assistance System (ADAS), involving **C++** programming, **Bash** scripting, **Raspberry Pi** configuration, vehicle system integration, and program management. The system interacted with CAN bus, existing ADAS modules, Google Dialogflow, and audio peripherals. Received positive feedback at CES 2025.
- Facilitated collaborative performance analyses of voice-activated ADAS program for data-driven enhancements.
- Introduced and developed automation solutions using **Python** and Excel scripting to streamline data collection, processing, and bulk database updates, resulting in 90% reduction in manual labor for associated tasks.

UTAC Inc., *Software Development Intern* | Northville Township, MI   May 2023 – Aug 2023

- Utilized LabVIEW to enhance software functionality by integrating email, data acquisition, and data export features.
- Leveraged data acquisition feature for successful live power monitoring/logging of test stands.

UoM Formula SAE Electric, *Autonomous Team Member* | Ann Arbor, MI   Aug 2023 – Jan 2024

- Researched and developed trajectory tracking algorithm for autonomous vehicle, increasing tracking accuracy by 25%.

UoM Formula SAE Combustion, *Powertrain Team Member* | Dearborn, MI   Aug 2022 – Apr 2023

- Conducted stress analyses and created engineering drawings in SOLIDWORKS. Manufactured and validated parts.
- Rebuilt engine and analyzed dyno results for performance tuning.

Goodlyfe LLC, *Manager* | Van Buren Twp, MI   Jan 2021 – Jan 2022

- Streamlined production processes and implemented data-driven scheduling optimizations, saving $5000 per month.

PROJECTS

Piazza Post Categorizer | *Machine Learning (ML), C++, Binary Search Tree*

- Developed ML-based classifier for online forum posts (Piazza), achieving 90% accuracy on labeled datasets.

Out-of-Order RISC-V Microprocessor | *SystemVerilog, RISC-V, Python*

- Developed RTL specifications and testbenches for synthesizable CPU with 2-way execution, early tag broadcasting, load-store queue, write-back data/instruction caches, and 2-bit saturated branch predictor, achieving **12.87ns** clock period.
- Constructed modular and configurable GUI visual debugger based on Python and VCD file parsing.

NASA Mars Rover (Prototype) | *C++, Arduino Uno, Arduino IDE, 3D Printing*

- Led team of 4 in prototyping model of NASA Mars Rover within design constraints using rapid prototyping techniques, engineering design standards, and requirements management. Features include collision avoidance and functional robotic arm.
- Designed, 3D printed, and tested multi-terrain wheels for maximal stability and traction on different surface conditions.

Accelerometer Data Logger | *C++, Arduino IDE, ESP32, PCB*

- Designed and assembled **ESP32**-based PCB for 3-axis acceleration logging and real-time upload to Google Sheets.

Venturi Design and Simulation | *SolidWorks, CAD, Computational Fluid Dynamics (CFD)*

- Utilized SolidWorks and CFD simulations to design and test variable Venturi geometries for optimized airflow.

LEADERSHIP

National Gaming Competition

- Founded and led 120-member team in securing 2nd place in three-month gaming competition.

Student Leader

- Led community service event as Student Leader, Early College Alliance at Eastern Michigan University.

SKILLS

Languages	C/C++, Python, SystemVerilog, Bash, Matlab, Git, LaTeX, Excel VBA, DXL (IBM DOORS)
Software	Arduino IDE, Linux (Ubuntu, Arch, EndeavourOS), Docker, Verdi, SolidWorks, Simulink, LaTeX, Microsoft 365
Technical	Algorithm optimization, object-oriented programming, program management, system testing/debugging/validation, flow/stress simulations, engineering design, data acquisition/analysis, soldering, oscilloscope.
Interests	Software/systems engineering, video game development, cars/motorcycles, psychology, rock climbing, nature