Thomas John Neuenfeldt

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EDUCATION

University of Michigan   **Ann Arbor, MI**
Bachelor of Science: Engineering in Computer Science; Minor in Music   *May 2026*
GPA: 4.0 / 4.0
Coursework**:** Computational Linear Algebra, Discrete Mathematics, Algorithms and Data Structures, Human-Robot Interaction, Computer Organization, Machine Learning

SKILLS

Backend: Java, C/C++, Python, Django, Julia, MATLAB/Simulink, PyTorch
Frontend: Vue.js, HTML, JavaScript, CSS
Computer: ROS, Linux/Unix systems

WORK EXPERIENCE

Nexteer Automotive   **Saginaw, MI**
Software Development Intern   *May 2023 – August 2023*
- Collaborated with senior software engineers to design and program a customer requirement intake tool which identifies requirement changes based on a Simulink model using Python, MATLAB/Simulink, and HTML.
- Transformed existing OEM requirements command-based system to a user-friendly interface using MATLAB/Simulink.
- Strengthened intern collaboration through designing, constructing, and racing a Go-Kart using recycled materials from the plant.

Michigan State University   **Midland, MI**
Material Science Research Intern   *June 2022 – August 2022*
- Analyzed and prioritized various biodegradable plastic materials using 3D printers, Autodesk Fusion360, and nTopology to identify the ideal structures which will facilitate wound healing and replace traditional metal rods utilized in surgeries.
- Authored a formal research paper utilizing doctorate research methodology and presented to the American Chemistry Society.

PROJECT EXPERIENCE

University of Michigan MRover Project Team   **Ann Arbor, MI**
Teleoperations Lead   *August 2022 – Present*
- Lead a team in designing and implementing a user-friendly interface utilizing Vue.js and Django to enable bidirectional communication with the rover, which operates on a ROS/Linux system.
- Accountable for team cohesiveness and sustainability including recruiting, onboarding, and knowledge transfer with the help of the MRover GitHub repository.

University of Michigan   **Ann Arbor, MI**
Traveling Salesperson Solver   *August 2023 – December 2023*
- Implemented a branch-and-bound solver using C++ to find the most efficient path that visits each node only once in a graph. Tested different greedy heuristics to find the close-to-optimal path taken.

Image Classification   *January 2024 – April 2024*
- Using PyTorch (Python), developed a custom convolutional neural network model to classify landmarks across Europe and applied transfer learning to the model to improve training.

FIRST Robotics   **Midland, MI**
Lead Programmer, Student Director   *September 2012 – May 2022*
- Designed and programmed a robot using Java to autonomously complete tasks. Utilized SCRUM methodology to optimize project management milestones. Enforced gracious professionalism amongst team members.

ACTIVITIES

University of Michigan Marching Band*, Member*   *August 2022 – Present*
4-H Community Service, *Volunteer*   *September 2008 – June 2022*