Matthew G. Martin II

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EDUCATION

University of Michigan – College of Engineering   **Ann Arbor, MI**
Bachelor of Science in Engineering, Computer Science   *Expected April 2023*
GPA: 3.832/4.00
Course work: Data Structures and Algorithms, Linear Algebra, Intro to Computer Organization, Foundations of CS

EXPERIENCE

Michigan Mars Rover Project Team [C++, CUDA, Git, Python]   **Ann Arbor, MI**
Perception Sub-Team Lead, Autonomous Branch Lead   *September 2019 – Present*
- Researched and led the creation of a custom GPU based implementation of the sub-team's current obstacle detection pipeline, which provided a 3x system speedup
- Independently, developed the current obstacle avoidance system, which leverages the Point Cloud Library to detect distinct objects in the environment, and which will be replaced by the custom GPU implementation
- Constructed a Linux container and facilitated the distribution of the container to users on a remote computing cluster, so Perception team members could develop and work remotely

Invia Medical Imaging Solutions [C#, C++, SQL]   **Ann Arbor, MI**
Software Development Intern   *May 2021 – August 2021*
- Developed a system service using the .NET Framework for consolidating files into a zip archive, which improved the transmission speed of database files across a network by 10x
- Leveraged multi-threading to add the product feature of processing consolidated database files, which were compressed by the previously referenced service
- Added product functionality for analyzing a database's state and updating the database based on its state
- Solved and implemented fixes for a variety of product latency and file transfer defects

Personal Website [HTML, JavaScript, jQuery, CSS]   **Northville, MI**
Developer   *March 2020 – August 2020*
- Designed a website utilizing HTML, JavaScript, jQuery, and CSS, to better showcase my project work

LEADERSHIP

Michigan Mars Rover Project Team   **Ann Arbor, MI**
Autonomous Branch Lead   *May 2021 - Present*
- Overseeing the 4 auton sub-branches by coordinating branch-wide projects and monitoring sub-branch progress
- Directing and aiding the research and development of a new autonomous inter-branch Simultaneous Localization and Mapping (SLAM) system

Perception Sub-Team Lead   *March 2020 – May 2021*
- Remotely managed a team of 13 undergraduate students in rewriting and providing a 6x acceleration to the Perception vision processing code
- Focused on supporting and supervising sub-team members, to ensure members felt connected and stayed productive despite working remotely

Blue Jitsu   **Ann Arbor, MI**
Vice President   *June 2021 - Present*
- Teach new members basic techniques and train with them to reinforce these techniques, so that they can fight competitively and safely
- Collaborate with other members of the leadership team to plan and lead promotional events and seminars

Eagle Scout – Boy Scouts of America   **Northville, MI**
Senior Patrol Leader, Philmont Crew Leader   *Fall 2015 – Present*
- Organized and executed 3 robotics camps, which promoted awareness of STEM for 30 grade school students

SKILLS

- Proficient: C++, C#, CUDA, Git, Linux, HTML, JavaScript
- Developing: SQL, MATLAB, Java, jQuery, CSS