Sean Oliver

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Education	**University of Michigan**	Ann Arbor, MI
	Bachelor of Science in Engineering in Computer Science, Minor in Mathematics	Dec. 2020

GPA: 3.62/4.00
Relevant Coursework: Data Structures and Algorithms, Intro to Autonomous Electronic Systems, Intro to Algorithmic Robotics, Machine Learning, Intro to Artificial Intelligence, Computer Security

Computer	**Languages:**	C++/C, Python, MATLAB, HTML, CSS, JavaScript, Visual Basic
Skills	**Tools:**	ROS, Linux, Bash Scripting, Git, Visual Studio, Microsoft Excel and Office, Autodesk Inventor

Work	**Bosch (Position Obtained and Rescinded Due to COVID-19)**	Plymouth, MI
Experience	*Autonomous Driving Software Engineering Intern*	May – Aug. 2020

- Hired to develop software to enable level two autonomous driving

Project Experience

University of Michigan Autonomous Robotic Vehicle — Ann Arbor, MI
(Formerly Intelligent Ground Vehicle) — Sept. 2018 – Present
Controls Subteam Member

- Worked in a startup environment to develop an autonomous vehicle
- Developed simulations of a robot using ROS and Gazebo with real-time Lidar updating
- Implemented ROS nodes to extract LiDAR and Odometric data from the simulation with C++
- Designed and implemented a custom trajectory planning algorithm using Linear Algebra

Controls Subteam Lead — Ann Arbor, MI
Sept. 2019 – May 2020

- Led implementation and testing of A-Star planning algorithm
- Trained a team of 6 programmers in ROS, Modern C++, Git, and Linux
- Led creation of a ROS unit testing framework

University of Michigan Science Olympiad — Ann Arbor, MI
CodeBusters Grader — Sept. 2017 – Feb. 2018

- Created an open source project to automatically grade tests
- Used C++, Python, Bash, and Makefiles
- Reduced the time taken to grade tests greatly

ENGR 100 Autonomous Quadcopter Project — Ann Arbor, MI
Team Member — Mar. 2018 – Apr. 2018

- Designed an autonomous quadcopter to navigate an obstacle course using C++
- Implemented PID control, sensor filtering, and signal processing to achieve course navigation
- Presented design reviews and technical milestone updates

Leadership

Michigan Applied Robotics Group (MARG) — Ann Arbor, MI
Executive Board Member — May 2020 - Present

- Organized and presented concerns of the undergraduate robotics community to the Michigan Robotics Institute
- Collaborated with professors and companies to organize events for students interested in robotics
- Managed MARG Budget

Boy Scouts of America — Haslett, MI
Achieved Rank of Eagle Scout — Aug. 2010 – Present

- Planned and led a project to build a storage shed for a local High School Marching Band to improve emergency safety
- Fund raised $700 for the project
- Led and trained 22 workers in 190 labor hours to complete the project