Joshua Manela

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EDUCATION

Michigan Technological University
Computer Engineering with a Minors in Mathematics and Computer Science, Expected Graduation: Fall 2015, GPA 3.71

EXPERIENCE

Software Development Engineering Intern, Amazon
August 2014 - November 2014

- Thorough preparation of software design with rigorous design evaluations, while managing time in an Agile environment.
- Implemented RESTful APIs which call a NoSQL database.

Student Researcher, Michigan Technological University
September 2013 - Present

- Designed peripheral hardware for a robotic quadcopter to survey highways and bridges.
- Developed various SLAM (Simultaneous Localization and Mapping) algorithms.
- Reconstructed a real-life bridge after having been flown over by a drone, using custom hardware and SLAM algorithms.

Software and Controls Engineering Co-op, Mercury Marine
January 2013 - August 2013

- Extensive use of MatLab and Simulink to modify and update Engine Controller Code and debug engine knock issues.
- Soldered, crimped, designed, and built engine harness for production and test designs.
- Wrote CAN, RFID, and IO libraries in C for an ATMEL AT90CAN128 processor to be used in security applications.

Robotic Simulation and Programming Intern, Applied Manufacturing Technologies
Summer 2012

- Laid out and simulated industrial robots using the Delmia I-GRIP CAD/Sim Package.
- Collaborated with other Simulation Engineers and wrote macros to improve CAD and simulation speed.

Resident Assistant, Michigan Technological University
August 2013 - April 2014

- Planned and organized hall activities and programs.
- Monitored hall and responded to situations in the residence halls to get them under control.
- Wrote concern reports, warning reports, and incident reports as necessary.

Lead Instructor, The Robot Garage
June 2011 - August 2012

- Wrote K-12 curriculum and led robotics classes and camps for the robot garage.
- Focused on the integration of mechanical and software design.
- Created the "Sumo Bot" stand-alone customizable robotics system still in use today.

Skills

- C/C++/Assembly
- Java/Visual Basic.NET
- FANUC
- MatLab/Simulink
- LabView/NXT-G
- Public Speaking
- Leadership
- Tektronix O-Scope
- Electrical Hardware Fabrication
- Mentoring
- Embedded Design
- Frequency Analysis
- Curriculum Development

Other Activities and Certifications

- Mentored multiple FIRST Robotics teams, including 2586 Copper Bots, 2194 Fondy Fire, and 27 Team RUSH
- CPR, AED, and First Aid Certified
- PADI Open Water Certification (certified scuba diver)