Jack Shelata

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Education

UNIVERSITY OF MICHIGAN – ANN ARBOR, MI

B.S.E. Computer Science – May 2020
· *GPA*: 3.11/4.00

Notable Course Topics

- Operating Systems
- Computer Security
- Artificial Intelligence
- Linear Algebra
- Computation Theory
- Web Systems
- Logic Design
- Computer Organization
- Data Structures and Algorithms

Work Experience

SOFTWARE ENGINEERING INTERN | COMAU | MAY 2019 – AUGUST 2019
· Helped kickstart Comau's Digital Manufacturing division in the United States focusing on IIoT solutions
· Built software to detect anomalies in vibrational sensor data and monitor health of components
· Integrated these software systems with Comau manufacturing machinery in FCA's SHAP to allow for increased plant visibility and near real-time facility monitoring on Comau's IIoT platform
· Designed UI for plant operators for viewing near real-time manufacturing performance data

SOFTWARE ENGINEERING INTERN | COMAU | MAY 2018 – AUGUST 2018
· Implemented functional control software for 6-axis robotic arm using C++ and ROS
· Leveraged parallel programming and reinforcement learning techniques on NVIDIA GPU to train 6-axis robotic arm for pick and place in Gazebo simulation
· Recreated real-world environment in simulation using Python and OpenCV to track and place objects
· Maintained project repository using Git for version control and Doxygen auto documentation

MECHANICAL DESIGN INTERN | COMAU | MAY 2017 – AUGUST 2017
· Effectively brought solutions to life using SolidWorks and AutoCAD for major automotive customers
· Collaborated with senior engineers developing products to implement in large scale assembly lines
· Created and presented mechanical software training documentation to executive leadership team

Skills & Abilities

COMPUTER TECHNOLOGY
· *Proficient in*: C/C++, Python, HTML/CSS/JavaScript
· *Familiar with:* Java, C#, SQL, Assembly, Verilog HDL, MATLAB, RabbitMQ
· *Other skills:* Vim, Git, Linux OS, ROS, Arduino, Gazebo, PTC ThingWorx, SolidWorks, Agile, REST APIs

EXTRACURRICULAR INVOLVEMENT
· *Software Lead – Robotic Exploration of Space Team*:
  o Designed, developed, and tested control system for competition rover using C++, Python, ROS, and simulation in Gazebo
  o Actively managed team members and delegated tasks according to experience level and ability
  o Competed against over 40 other universities in the NASA Robotic Mining Competition
· *Senior Software Advisor – Robotic Exploration of Space Team*:
  o Assist new team leadership in designing autonomous rover software systems
  o Participate in team outreach activities including recruiting and community service events