John Monsen
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Education

Bachelors of Science in Engineering Physics (Mechanical Engineering)   *Anticipated May 2027*
Robotics Minor
University of Massachusetts Lowell, Lowell, MA
Classes: Chemistry 1 + 2, Calculus 1 + 2 + 3, Physics 1 + 2 + 3, Statics, Dynamics, Strength of Materials, Computer Aided Design, Materials Science, Manufacturing Laboratory, Logic Design, Thermodynamics

Skills

Operating Systems/Software: Unix/Linux, Mac OSX, Windows Server, ROS2, Microcontrollers
Documentation: Confluence, Jira, MS Word, Excel, PowerPoint, LaTeX
Programming: Java, Python, C#, C++, JavaScript, HTML, CSS, NodeJS
Design Software: SolidWorks, Creo Parametric, Photoshop, Premiere Pro, Illustrator
Manufacturing Machinery: CNC Turning/Milling, Resin/FDM 3D Printers, Laser Cutting, Sheet Metal, TIG/MIG

Work Experience

Mechanical Engineering Co-op   *Jun. – Dec. 2023*
Saturday Robotics, Watertown, MA
- Focused on rapid prototyping leading to filing a patent application on the working prototype.
- Worked closely with head of intellectual property, communicating design and drawings for patent application.
- Actively collaborated and communicated within multidisciplinary teams in a fast-paced startup environment.
- Led design reviews at key prototyping phases to gather feedback, improve upon mechanical design, and showcase design decisions with visuals from testing and experimentation.
- Conducted process development validation and programmatic experimental testing on autonomous systems.
- Utilized Confluence and Jira for project documentation, communication, and collaboration workflows.

Lab Assistant – Manufacturing Laboratory (MECH.2020)   *Feb. 2023 – May 2024*
University of Massachusetts Lowell, Lowell, MA
- Assist in safe and effective deployment of machining course labs, including manual machining, metrology, and CNC.
- Provide feedback and mentorship to students, support their performance assessment and skill development in class and in the UML MakerSpace.

Mechanical Engineer   *May – Aug. 2022*
OK International Inc., Marlborough, MA
- Designed, developed, and executed packaging automation machine projects with 3D CAD (SolidWorks) and generated BOMs and drawings (SolidWorks and AutoCAD).
- Collaborated with sales and engineering department to determine functional requirements and reviewed projects from multiple manufacturing locations for commonality of design, components, and program methodology.

Frontline Technical Support   *Sep. – Dec. 2020*
MathWorks, Inc., Natick, MA
- Assisted internal users with one-on-one support and troubleshooting for various problems with software, or hardware.
- Setup desktop machines with software images and deployed computer setups to offices and assisted with inventory management.

Relevant Experience

Semi-Finalist, FilaMill - UML DifferenceMaker Prototyping Competition, UMass Lowell, Lowell, MA   *Fall 2022*
- Managed a team of 3 in the design of a prototype for a machine that recycles home plastics into 3D printer filament.
- Facilitated team meetings, communicating project status and challenges.

Certificates

Certified SolidWorks Associate - DS SolidWorks Corporation, License C-ENVQUP3JDR