Antonio Fiocca, EIT

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EXPERIENCE

Robotics Engineer

Redzone Robotics **September 2022 - Present, Warrendale, PA**

• Troubleshoot and resolve issues with robotic systems, improving overall system reliability by collaborating with cross-functional teams to identify issues, using a variety of tools and data to find root cause of issues.
• Designed unit test plans and procedures to reduce the system defects and meet product specifications before customer use. Reduced the time needed for testing by creating and utilizing test fixtures, and automated software, resulting in a reduction in the number of defects found after the product was delivered to customers.
• Developed design requirements for robots by conducting market research on customer needs and uses, and identified appropriate design metrics .
• Aided in the development of robotic systems (i.e. PCB, motor, sensors, and software development) using ROS2, Python, and hardware.
• Developed tests to verify the accuracy and reliability of robotic systems, ran systems through testing scenarios and analyzed the results to ensure optimal performance, resulting in a 95% Root Cause Identification accuracy.
• Created an image processing pipeline implementing several image distortion and analyzation techniques to assess camera quality, resulting in optimized image capture for robotic applications.

Project Engineer

Richmond Engineering **September 2021 - September 2022, Pittsburgh, PA**

• Ensured that all electrical designs were implemented to NEC standards, such as MCCs, Conduit layout, Cable sizing, AC and DC Drives, by completing the electrical drawing design and quality assurance processes.
• Conducted existing system upgrades and integration of newly developed technology, resulting in a reduction of downtime, improved system performance, and a more stable environment for the production of core products.
• Conducted existing system upgrades and integration of newly developed technology, as well as improving customer service satisfaction by providing technical support in the field, resulting in a 50% increase in customer satisfaction over the previous year.
• Managed customer-facing field service projects to ensure timely delivery of equipment and customer satisfaction, including overseeing on-location demo and installation, emergency servicing of equipment on-location, and ongoing vendor and customer communication.
• Responsible for the electrical drawing design and quality assurance processes for 8 projects that required MCCs, Conduit layout, Panel Layout, Cable sizing, AC and DC Drives.
•Developed 2 complex machines using Allen Bradley PLCs, focusing on both the human-machine interaction and the overall system logic, by working closely with the machine operators, and by using the PLC programming software called RSLogix 5000, and Studio 5000.

Electrical Engineering EIT

Conair group **September 2019 - April 2021, Cranberry, PA**

• Lead New Product Development for 4 projects, managing software development, communications between systems, and electrical hardware design.
• Led Software development efforts on multiple projects, For example, developed a pattern recognition algorithm using Realtime sensor data and feedback loop to maintain a consistent processing by developing algorithms and tools to track and maintain the system. Resulting in a patent being filed.
• Improved the efficiency of the data analysis process for the design of a new product to 1/10 the original processing time by developing an algorithm to automatically analyze large amounts of data.
• Developed, tested and implemented new products for an international automation company as a PLC Programmer (Ansi C) by collaborating with Electrical and Mechanical Engineers, and performing programming, testing, and documentation of new products related to automation.
• Redesigned existing programs and systems; reduced software debugging time by 60% and decreased program runtime by 20%. .

EDUCATION

Bachelors in Electrical Engineering

Minor in Computer Science • University of Pittsburgh • Pittsburgh, PA • 2021

SKILLS

Soft Skills: Oral and written communication, Critical Thinking, Self Starter, Quick Learner, Problem-solving, Time management

Technical Skills: Electrical Engineering, Project Management, System architecture, Scope Of Work, Technical Documentation, and Documentation control, Scheduling, Design Project Deliverables, ROS2, Python