YASWANTH POTLAPALLI

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SUMMARY

A highly motivated Automation & Controls Engineer with expertise in Control Systems, PLC programming, HMI development, Robotics & Automation, gained through diverse experiences & environments. Seeking a full-time opportunity in a manufacturing or automation environment, where my skills in designing control systems & automating technologies can add value.

SKILLS

Technical skills: Control Systems | PLC programming (Allen-Bradley) | HMI programming | FANUC Robot Programming | Ladder Logic Programming | Electrical Controls | Schematics | Electrical designs | HMI design & development | Pneumatic & Hydraulics | Machine vision systems | Variable Frequency Drives | Ignition SCADA.

Soft skills: Problem solving, Analytical thinking, Troubleshooting, Attention-to-detail, Project management, Communication skills

Softwares: RsLogix 5000 | Studio 5000 | FactoryTalk View | Autocad Electrical | Fanuc Roboguide | LabView | MS office suite

EDUCATION

Master's in **Mechatronics Robotics** & **Automation Engineering** *Expected: April 2025*
Michigan Technological University | Houghton, MI, USA *GPA: 3.3*
Coursework: Control Systems, PLC, Advance PLC, Fanuc Robot Technology, Data Acquisition systems, Applied Fluid Power.
Bachelors in **Robotics Engineering** *2018-2022*
Vivekananda Global University | Jaipur, India *GPA: 3.5*

EXPERIENCE

Advanced PLC - Graduate Teaching Assistant | Michigan Technological University *Dec 2024 - Present*

- Supervising lab sessions for Advanced PLC course, focusing on programming Rockwell PLCs & designing Human-Machine Interfaces (HMIs) using FactoryTalk View for real-time monitoring and control.
- Guiding students in developing Allen Bradley & Siemens PLC programs with RSLogix 5000 & Studio 5000 to automate tasks like Pick & Place, Sorting, Parts Assembly, ensuring compliance with industrial control automation standards.
- Working on process control systems to regulate parameters like temperature, pressure and flow, ensuring optimal performance and process efficiency using programmable logic controllers (PLC).

Electrical Machinery & Controls - Graduate Teaching Assistant| Michigan Tech *Aug 2024 - Dec 2024*

- Conducted Electrical Machinery & Controls Lab sessions, covering Electrical wirings, Schematic diagrams, Electrical Control panels, AC/DC motor controls, 3-phase load systems, Power distribution systems.
- Guided students in developing & drawing electrical diagrams for electrical machinery using Autocad Electrical software. Addressed students to clarify electrical engineering concepts and assisted in resolving electrical troubleshooting issues.
- Assisted the professor with design, development, repair, troubleshooting and commissioning of electrical lab equipment.

Robotics Engineer Intern | Quantum Robotics, Jaipur India *Aug 2022 - Dec 2022*

- Trained in robot programming and developed automation solutions for a food preparation robot, designed to enhance efficiency in food manufacturing industries, ensuring smooth integration into existing automation workflows.
- Conducted experiments to identify solutions & techniques for automating robotic tasks, contributing to developing & programming an automated food making robot to perform tasks with enhanced speed, accuracy & reliability.
- Responsible for developing, reprogramming, troubleshooting, commissioning of robots, adapting systems to meet task requirements and preparing comprehensive support documentation.

PROJECTS

Elevator Control System using PLC & HMI *Nov 2024*

- Designed and implemented a PLC-based elevator control system to improve functionality, reduce wiring complexity, simplify maintenance and streamline troubleshooting, offering significant advantages over traditional relay logic systems.
- Developed a Human-Machine Interface (HMI) using FactoryTalk View for real-time monitoring & control, enhancing speed & accuracy, particularly in skyscrapers, where PLCs excel at handling large, complex operations with ease.
- Integrated a Factory I/O simulation to demonstrate the functionality of PLCs, HMIs and Ethernet IP. Enhanced system performance by 25% and minimized downtime in high-rise building operations.

Automotive Painting Control System Using PLC *April 2024*

- Engineered and deployed an advanced PLC-based automation control system to automate the painting of automobile body panels, replacing manual processes, which increased production speed by 20% and reduced operational costs by 15%.
- Applied Controls Engineering principles to program Rockwell Allen Bradley PLCs using ladder logic & integrated Fanuc robots for automated pick-and-place, further enhancing production processes speed and reducing manual handling errors.
- Utilized SCADA to monitor data, ensuring real-time oversight, improving process efficiency & minimizing downtime.

Pick & Place Fanuc Robot *Dec 2023*

- Designed and integrated an innovative end effector combining both suction and gripping functions, replacing traditional single-function tools to improve efficiency in automation and manufacturing environments.
- Programmed robot with precise teaching points, integrated the customized end effector to robot. Used Fanuc RoboGuide for simulation to ensure all functionalities were working correctly, providing a visual representation of the entire process.
- Achieved a 25% increase in production speed by enabling simultaneous suction and gripping, driving improvements in packaging and manufacturing industries.