AJAY S

Tirupur, Tamil Nadu, India | +91 9566588778 | ajaysaravanakumarr@gmail.com
www.ajaysvj.dev | linkedin.com/in/ajay-s

CAREER OBJECTIVE

Diligent Automation Engineer with a strong focus on Research and Development. Highly skilled in bridging mechanical and electrical engineering to build system level solutions, with practical experience in PLC programming and robotic simulation. A quick learner and a collaborative team player with a strong passion for building innovative technologies for the space robotics, robotic manufacturing and defense sectors.

SKILLS

- SolidWorks
- Research & Development
- Control Systems
- Project Management
- AutoCAD
- MATLAB
- System Design
- Product Development
- Robot Simulation
- PLC

PROJECTS

Autonomous Intravenous Line Detection and Pointing Robot Aug *2025 - Mar 2026*

- Developed an autonomous robotic system for IV line detection and laser based pointing using vision sensors.
- Implements precise motion control with stepper motors and real-time feedback for accurate targeting.
- Designed a low cost medical assistance prototype to enhance accuracy and safety in IV line identification.

Tech Stack : *SolidWorks, Raspberry Pi, OpenCV, Python, IoT, Embedded C, Linux, Version Control, Kinematics*

P&ID to Digital Intelligence System *Aug 2025 - Sep 2025*

- Developed a deep learning system to convert Piping and Instrumentation Diagrams (P&IDs) into intelligent digital industrial formats such as CSV, XML and JSON for engineering analysis.
- Implemented automated data extraction, text recognition, and tag classification using OCR, NLP, and OpenCV.
- Deployed the end to end solution on Vertex AI and Google Cloud for real time processing and visualization.

Tech Stack : *OCR, NLP, OpenCV, PyTorch, Vertex AI, Google Cloud, NumPy, Pandas, Version Control*

IOT Based Smart Seeding and Spraying Robot *Sep 2024 - Nov 2024*

- Developed an IoT-based smart seeding and spraying robot using ESP MCU, sensor integration, application integration and automation for precise motion control and real-time monitoring.
- Achieved a 30% increase in seeding accuracy and a 25% reduction in chemical usage, supporting sustainable farming

Tech Stack : *ESP 8266, Blynk, SolidWorks, Arduino IDE, IoT, System Integration, Sensors and Actuators.*

PROFESSIONAL EXPERIENCE

Controls Engineer
AIROVAX INDIA Pvt. Ltd., Coimbatore, Tamil Nadu *Apr 2026 - Jul 2026*

- Developed and integrated industrial automation solutions using PLC, HMI, servo motors, electrical control panels, industrial communication networks, and Electrical CAD, supporting machine commissioning and production requirements.
- Managed end to end project lifecycles from research, procurement, and supply chain logistics to practical panel wiring, collaborating with cross functional teams to deliver technical documentation & strong customer relations.

Research Intern
SPAROBIX , Ahmedabad, Gujarat *Mar 2025 - Sep 2025*

- Conducted research on Autonomous robotic manipulation, Human-robot interaction & teleoperation, and Macro-scale robotic 3D printing for in-space manufacturing.
- Collaborated with engineering teams in weekly meetings to present, review, and prototype robotic solutions using advanced simulation tools such as gazebo and ROS.

Mechatronics Intern
Thalir Automations, Coimbatore, Tamil Nadu *May 2025 - Jun 2025*

- Worked on real world industrial automation projects such as Input shaft Bearing pressing machine, Performance testing machine and Seal pressing machine.
- Gained hands on experience in PLC communication, Hydro-pneumatics and Electrical panel wiring.
- Developed skills in Assembly engineering, Automation processes, and Industrial networking protocols.

EDUCATION

Master of Engineering (M.E.) in **Mechatronics** *Jul 2026 - Present*
Madras Institute of Technology, Anna University, Chennai - 600044

Bachelor of Engineering (B.E.) in **Mechatronics Engineering** *Oct 2022 - May 2026*
Sri Krishna College of Engineering and Technology, Coimbatore - 641008

LANGUAGES KNOWN • Tamil • English **INTERESTS** • Drawing • Designing • Digital Scouting