AJAY S

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

CAREER OBJECTIVE

Diligent and motivated Mechatronics Engineering student with a strong focus on robotics, machine learning, and automation. Experienced in developing autonomous robotic systems and IoT-based applications, with practical expertise in system design, SolidWorks, deep learning modules, and various simulation tools. A quick learner and effective team collaborator, committed to innovation and continuous learning. Passionate about defence technologies, particularly in the areas of space science and naval applications.

SKILLS

- SolidWorks
- FATEK PLC
- Linux
- Machine Learning
- Python
- Embedded System
- Project Management
- Version Control
- ROS
- Vertex AI

PROJECTS

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*

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.
- Implemented automated symbol detection, 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, Pyvis, NetworkX, Version Control*

Autonomous Intravenous Line Detection and Pointing Robot   *Aug 2025 - Mar 2026*
- Develops 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.
- Designs a low-cost medical assistance prototype to enhance accuracy and safety in IV line identification.

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

PROFESSIONAL EXPERIENCE

Quality Control Intern
HARSHA CNC, Coimbatore, Tamil Nadu   *Jul 2024 - Jul 2024*
- Executed machining operations and collaborated with the Quality Control team to optimize processes and reduce downtime.
- Performed routine maintenance and used CAD/CAM software for improving machining accuracy and efficiency.

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 Team based project execution.

Research Intern (Remote)
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.

EDUCATION

Bachelor of Engineering (B.E.) in **Mechatronics Engineering**   *Oct 2022 - May 2026*
Sri Krishna College of Engineering and Technology, Coimbatore - 641008
CGPA: 7.68

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