



SRIVARSAN T

QA/QC INSPECTOR | WELDING INSPECTOR | PROCESS OPTIMIZATION | MECHATRONICS ENGINEER |

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EXECUTIVE SUMMARY

Recent B.Tech graduate in Mechatronics Engineering with hands-on experience in fabrication workflows, production engineering, and quality assurance. Proficient in CAD/CAE tools and certified in CSWIP 3.1 and NDT Level 2. Adept at applying Six Sigma methodologies to enhance manufacturing efficiency and reduce defects. Actively seeking opportunities in QA/QC, welding inspection, or process optimization roles within industrial automation or smart manufacturing sectors to contribute to high-impact engineering solutions.

CORE COMPETENCIES

- CAD Tools: SolidWorks, AutoCAD, Creo.
- Simulation: Ansys, MATLAB Simulink, Automation Studio, CoppeliaSim.
- Manufacturing: Six Sigma (DMAIC, DMADV), Lean Tools, VSM, SOP Development.
- Quality & Standards: CSWIP 3.1, NDT Level II (PT, UT, MT, RT), IATF 16949.
- Automation: PLC, SCADA Systems, LabVIEW, CoDeSys, ESP32.
- Documentation: BOM Creation, Process Validation, Design for Manufacturing (DFM).

EDUCATION

SASTRA DEEMED TO BE UNIVERSITY

OCT 21 - JUN 25

- Bachelor of Technology Mechatronics. CGPA - 7.29/10

LICENCE & CERTIFICATION

- CSWIP 3.1 - WELDING INSPECTOR
 - Identification Number : 000084999
 - Issued By : TWI
 - Valid until : 20/08/2035

Internationally recognized certification authorizing visual inspection of welded joints, assessment of weld quality, and verification of compliance with **WPS**, **WQT**, and international codes (**ISO 17637**, **AWS D1.1**, **ISO 9606**, **ISO 15609**, **ISO 6520**).

- AMERICAN SOCIETY FOR NON DESTRUCTIVE TESTING - LEVEL II
 - Identification Number : HA/PT,UT,MT,RT/07-23/02
 - Issued By : ASNT
 - Valid until : 14/07/2028

Qualified as per **ASNT SNT-TC-1A** to perform, interpret, and evaluate NDT methods (PT, UT, MT, RT). Experienced with **ASME BPVC Section V** for nondestructive examination procedures, **Section VIII** for pressure vessel weld inspection acceptance criteria, and **Section IX** for welding procedure (WPS) and welder qualification (WQT).

➤ SIX SIGMA YELLOW AND WHITE BELT

- Identification Number : 900974
- Issued By : Six Sigma Study

Internationally recognized certification authorizing visual inspection of welded joints, assessment of weld quality, and verification of compliance with **WPS**, **WQT**, and international codes (**ISO 17637**, **AWS D1.1**, **ISO 9606**, **ISO 15609**, **ISO 6520**).

➤ CERTIFICATION IN PRODUCT DESIGN & SIMULATION

- Identification Number : CO240229Z797469
- Issued By : CADD CENTRE TRAINING & SERVICES

Certification in Product Design & Simulation – Trained in **AutoCAD**, **SolidWorks**, and **Ansys** with expertise in **3D modeling**, **2D drafting**, and **product simulation**. Skilled in **parametric modeling**, **assembly design**, and **stress analysis**, with working knowledge of **GD&T** for precision drawings and **FMEA** for design risk evaluation.

➤ CERTIFICATION IN FUNDAMENTALS OF MATLAB

- Issued By : MATHWORKS

Fundamentals in MATLAB & Simulink – Gained proficiency in **MATLAB programming** for matrix operations, scripting, and data visualization, along with experience in **Simulink** for block-diagram modeling and simulation. Applied these tools in **mathematical modeling**, **control systems**, and **signal processing** for engineering analysis.

PROFESSIONAL EXPERIENCE

GLOBAL TVS BUS BODY BUILDERS LIMITED

MAR 25 - APR 25

➤ **NEW DEVELOPMENT - PROCESS ENGINEER**

- Developed a detailed SOP for a 140-step Trim Lane for the Ashok Leyland Viking 222 Bus, enhancing process standardization.
- Supported audit readiness for IATF 16949 through documentation and floor-level observation.
- Observed and documented fabrication and maintenance processes to align with quality requirements.

TEFUGEN TECHNOLOGIES PRIVATE LIMITED

JAN 25 - MAR 25

➤ **PRODUCTION ENGINEER**

- Worked with the quality team to apply Six Sigma (DMAIC) tools, reducing fabrication cycle time by 15%.
- Supported process planning and validation of test equipment to ensure 100% process compliance.
- Collaborated with design, QA, and production teams to align designs with manufacturability and quality standards.
- Contributed to benchmarking efforts and suggested minor cost-saving changes in component designs.

TAMILNADU ELECTRICITY BOARD

JUN 24 - JUN 24

➤ **INPLANT TRAINEE**

- Gained exposure to SCADA-based power monitoring systems and substation automation.
- Assisted with panel inspections and safety procedures related to grid-level power distribution.

CADD CENTRE

APR 24 - SEP 24

➤ **DESIGN ENGINEER**

- Drafted 2D models of structural elements, sheet metal components, and vehicle systems using AutoCAD and SolidWorks.
- Enhanced understanding of engineering drawing standards, tolerancing, and drafting best practices.
- Collaborated on design exercises simulating real-world applications in mechanical and automotive domains.

PROJECTS

- **STANDARD OPERATING PROCEDURE FOR MSRTC (Ashok Leyland - Viking 222)** **MAR 25 - APR 25**
 - Documented standardized work instructions for each of the 140 sequential tasks in a bus assembly line.
 - Improved operator understanding and training efficiency by creating visual and process-based documentation.
- **OPTIMIZING GUIDE VANE FABRICATION FOR SUSTAINABLE MANUFACTURING USING SIX SIGMA METHODOLOGY** **JAN 25 - APR 25**
 - Conducted defect analysis using 7 QC tools during guide vane fabrication.
 - Proposed process improvements that enhanced dimensional accuracy and reduced welding-related defects.
- **DEVELOPMENT & SIMULATION OF LEGGED ROBOT FOR VISUAL NAVIGATION AND EDGE DETECTION** **SEP 24 - NOV 24**
 - A legged mobile robot was modeled and programmed in CoppeliaSim using Lua scripting to autonomously navigate through a virtual environment equipped with onboard sensors and a vision system.
 - Images captured during navigation were processed using edge detection techniques in Python/MATLAB to analyze the robot's perception of its surroundings.
- **4-DOF Robotic Manipulator (ESP32 + CoppeliaSim)** **FEB 24 - APR 24**
 - Created a robotic arm model integrated with ESP32 for web-based remote control and simulation in CoppeliaSim.
 - Demonstrated real-time object manipulation using wireless embedded control, showcasing low-cost automation feasibility.
- **SHEET METAL DESIGN & 3D MODELLING** **FEB 24 - JUN 24**
 - Designed structural parts such as vehicle frames and support brackets using SolidWorks and AutoCAD.
 - Applied DFM principles and simplified geometry for efficient manufacturing and assembly.
- **FUEL INJECTOR INJECTION TIMING CONTROL** **DEC 23 - APR 24**
 - Designed and programmed a microcontroller-based timing control system to improve fuel injection precision and engine efficiency.
 - Developed a real-time control loop using Arduino and sensors for dynamic adjustment of injector pulses.
- **VOLTAGE LEVEL MONITORING SYSTEM USING MATLAB Simlink** **DEC 23 - APR 24**
 - Built a GUI in MATLAB for real-time voltage monitoring and overshoot alerts in electrical systems.
 - Enabled proactive maintenance by identifying voltage fluctuations outside predefined safety thresholds.

CERTIFICATIONS

- CSWIP 3.1 (Welding Inspector)
- ASNT NDT LEVEL II (VT, PT, MT, UT, RT)
- SIX SIGMA (YELLOW & WHITE) BELT
- SOLIDWORKS, AUTOCAD, ANSYS
- MATLAB & Simulink
- GD&T , FMEA , Supply Chain Management.
- APQP & IATF 16949. (*)

AREA OF INTEREST

- Quality Engineering & Process Automation.
- Industrial Automation.
- Smart Manufacturing.
- Lean Implementation & Continous Improvement.
- AMR & AGV.

LANGUAGE

- TAMIL
- ENGLISH
- HINDI