

DEEPAVARSHINI V

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PROFESSIONAL SUMMARY

QA Engineer with 1.7 years of experience in test automation and software validation, specializing in Selenium, Python, and API testing and CI/CD integration. Skilled in designing scalable automation framework that enhance testing efficiency and reduce manual effort. Experienced in working with embedded systems and hardware testing for HVAC system.

TECHNICAL SKILLS

Software Technologies & Programming

- Languages: Python, Java
- Web Technologies: HTML, CSS, JavaScript, Flask
- Version Control: Git, SVN, Helix

Test Automation & Quality Assurance

- Frameworks: Selenium WebDriver, Robot Framework
- Testing Types: Unit Testing, Regression Testing, Integration Testing, Performance Testing
- API Testing: Postman, JSON Mapping
- CI/CD: Jenkins

Embedded Systems & Hardware Protocols

- Communication Protocols: CAN, RS-485, UART, I2C
- Device Communication: USB HID
- Signal Processing and Real-time Testing
- HVAC Systems Testing and Optimization

PROFESSIONAL EXPERIENCE

Graduate Engineer

Chennai, Tamil Nadu

Trane Technology

July 2023 – February 2025

- Designed test framework for HVAC systems, combining hardware protocols (CAN, RS-485) with software testing tools to verify system functionality and performance across multiple units.
- Built automation scripts to test embedded system communications, reducing protocol testing time by 40% and improving accuracy in fault detection.
- Developed and deployed a web-based testing tool for HVAC systems, automating documentation and test data tracking, and this improved data accuracy by 60% to reduce manual efforts.
- Collaborated with hardware engineers to analyze and troubleshoot real-time embedded system issues related to CAN, RS-485 and USB communication protocol.
- Implemented real-time signal processing algorithms for LED automation testing, enhancing device behavior validation by 40%.

EDUCATION

Bachelor of Engineering in Computer Science

Kongunadu College of Engineering and Technology | Trichy, Tamil Nadu

July 2019 - April 2023 | **CGPA:** 8.97

PROJECTS

UIDD Change Process – GET Project

- Built a flask-based web application to compare and analyses changes between previous and updated documents, the tool identifies added, deleted lines, providing a detailed HTML diff for impact script.
- Integrated JSON based script mapping to identify impacted automation scripts based on keyword matching. The system highlights specific lines in Robot framework files affected by changes, ensuring accurate update.
- Utilized SVN commands and multi-threading to fetch and compare file revisions, generating Excel reports for tracking changes.

LED Automation framework - POC

- Created a python script to interface with HID device, capturing LED signals and converting raw data into readable status messages and implemented real time data parsing to extract and interpret device status code.
- Built a verification mechanism to compare collected LED status with expected value, ensuring accurate device behavior.
- Designed a robust signal processing mechanism to handle continues data streams and detect specific patterns.

ACHIVEMENTS & AWARDS

- Received recognition for successfully automating the UIDD change process, improving efficiency by 50% and ensuring timely project delivery while managing multiple responsibilities.
- Completed Scrum certification, demonstrating knowledge of Agile Methodologies and best practices in test automation and quality assurance.