

YASHWANTH GOWDA SATHISH

System Integration and Test Automation Engineer

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English (C1) | German (B1)

SUMMARY

Experienced System Integration and Test Automation Developer with a Master's in Electrical Engineering. Having experience creating and managing HIL/SIL test scripts, executing regression tests, and enhancing software efficiency. Proficient in agile methodologies, ASPICE and ISO26262 standards, and tools such as Python, C/C++, and Git. Dedicated to delivering high-quality software solutions by refining testing approaches and implementing process enhancements.

EXPERIENCE

Security Test Automation Developer

Volkswagen Infotainment GmbH

Sep 2023 – Present

Bochum, North Rhine-Westphalia, Germany

- Developed and implemented automated test scripts using Python (Robot framework and ENNA), improving testing efficiency and accuracy.
- Conducted software validation on ECUs using test benches to ensure compatibility and functionality.
- Collaborated with cross-functional teams to identify and address testing requirements, ensuring robust testing strategies.

Working Student IT

Exyte GmbH

Oct 2021 – Aug 2023

Stuttgart, Baden-Württemberg, Germany

- Automated IT workflows using Python, resulting in 20% efficiency gains in data management and reporting.
- Assisted in implementing business intelligence tools, providing actionable insights for the finance team.
- Contributed to the optimization of control systems for building automation processes.

Research Assistant

Fraunhofer IPA, IEW, ISW University of Stuttgart

October 2021 – Aug 2023

Stuttgart, Baden-Württemberg, Germany

- Developed and tested motor control systems using Arduino and ESP8266, integrating GUI development for user interaction and enhancing system usability.
- Designed GUIs and automated data handling using REST APIs for InfluxDB, improving data accessibility and analysis efficiency.
- Optimized embedded systems through STM32 microcontroller integration, UART and SPI communication, and firmware enhancements for improved system performance.
- Created a barcode system and managed high-volume data processing with Raspberry Pi and InfluxDB, demonstrating expertise in system integration and real-time analysis.

EDUCATION

University of Stuttgart

M.Sc. in Electrical Engineering, Smart Systems

Stuttgart, Germany

Apr 2021 – Oct 2023

Visvesvaraya Technological University (VTU)

BE in Electrical and Electronics Engineering

Karnataka, India

Aug 2015 – May 2019

PROJECTS

Automated Test Case Generation for ECU Security *Master's Thesis - University of Stuttgart*

Apr 2023 – Sep 2023
Python, VBA, OPC UA

- Developed automated test case generation for ECU security validation, focusing on scalability and efficiency in test automation within industrial electronics.
- Explored security test methodologies and process improvements for electronics manufacturing, contributing to enhanced production quality.

Design and Security Testing of Two-Way Solar Panel Tracking System *Smart Cities and IoT - University of Stuttgart*

Apr 2022 – Sep 2022
Python, Arduino, Raspberry Pi

- Designed and implemented an electronics prototype using Arduino and Raspberry Pi, focusing on energy efficiency and smart building automation.
- Applied system hardening techniques to ensure security in energy management systems.

Dynamic Performance and Security Analysis of Micro-Grid Systems *Bachelor's Thesis - VVCE, VTU*

Apr 2020 – Sep 2020
MATLAB, Simulink

- Developed and simulated electronics systems in micro-grid environments, focusing on security and performance optimization relevant to building automation.

TECHNICAL SKILLS

Programming Languages: Python, C, C++, SQL, MATLAB, VBA, Simulink.

Skills: Building Automation, System Integration, Energy Management, Process Optimization, Embedded Systems, IT Security Testing, Automation, Data Analysis.

Libraries & Tools: Power BI, SAP CO, MS Excel, Wireshark, nmap, Jira, GitHub, Azure DevOps, Vehicle Diagnostics Tools, ENNA, RobotFramework.

Business Tools: ERP Systems, Business Intelligence Tools, Budget Forecasting, Reporting Automation, Data Visualization.

Languages: Fluent in English (C1) and Intermediate in German (B1).

PUBLICATIONS

- Audio Assistance to Blind People Using GSM ([Publication Link.](#))
- Design of Two Way Solar Tracking ([Publication Link.](#))
- Smart Helmet using GPS and GSM Modem Tracking ([Publication Link.](#))

CERTIFICATIONS

- Google IT Automation with Python Specialization.
- Google Cybersecurity.
- Google Advanced Data Analytics Professional Certificate.
- Google Data Analytics Professional Certificate.
- Python for Everybody Specialization – By University of Michigan.