PAVAN KUMAR U

+91-7095980656|udayagiripavankumar222@gmail.com | LinkedIn

PROFESSIONAL SUMMARY

Experienced Test Engineer with **4+ years in automotive validation**, focused on **HIL/SIL testing, test automation, and requirements-based verification**. Hands-on experience with **Infotainment and Instrument Cluster** ECUs, leveraging **Python, ECU Test tool, GitHub Actions, and CI/CD pipelines** to enhance **test coverage, defect detection, and software reliability**.

EDUCATION

Bachelor of Technology – Electronics and Communication Engineering

Newton's Institute of Engineering, JNTU – Kakinada | CGPA: 7.04

TECHNICAL SKILLS

- CI/CD Platforms & Development Tools: CI Pipelines, Git, GitHub Actions, PyCharm, Python-based Frameworks (ENNA), GCP, Jfrog Artifactory, Swagger, looker studio, Firestore
- Programming & Scripting: **Python**, C
- Operating Systems & Platforms: Embedded Systems, Goldfish Emulator
- Automotive Testing Tools: **ECU Test Tool**, Vector, dSpace
- Test Management & Documentation: IBM DOORS, Code Beamer, IBM RQM, Confluence
- Communication Protocols: **CAN**, CAN FD, Automotive Ethernet, **UDS** (ISO 14229)
- Test Environments: HIL, SIL, **HIL Test Bench**, AUTOSAR Classic
- Defect Tracking Tools: JIRA, RTC

EMPLOYMENT EXPERIENCE

Verification & Validation Engineer

KPIT Technologies Pvt. Ltd., Bengaluru | Nov 2021 – Present

Leading vehicle software integration**, SIL/HIL validation, CI-integrated test automation, and continuous test execution pipelines** for **Instrument Cluster and Infotainment (IVI) ECUs**, improving **test coverage, early defect detection, and release readiness.**

PROJECT DETAILS

Client: CARIAD SE Volkswagen Group **July 2025 - Present**

Project: CI/CD Automation IVI

Environment: CI-Integrated SIL / HIL

Roles and Responsibilities:

- ✓ Developed and executed automated test cases using **GitHub Actions** on the **Goldfish** Emulator, enabling scalable CI-based validation of IVI features.
- ✓ Built and maintained CI workflows using **ENNA-based Python automation framework**, supporting infotainment (IVI) functional and system-level test scenarios.
- ✓ Executed CI jobs across **Dev and Beta** environments, ensuring consistent test coverage and early defect detection across release stages.
- ✓ Integrated automated test execution with **RADAR dashboards**, publishing results and enabling real-time quality monitoring and reporting.
- ✓ Automated validation for HCP3 and ICC ECUs, covering ECU communication, system behavior, and infotainment use-case verification.
- ✓ Performed Smoke, Sanity, Nightly, and Official Build testing to ensure baseline software stability before release promotion

Milestones:

- ✓ Enabled **automated execution and result evaluation** for IVI test suites using Python, improving regression efficiency.
- ✓ Ensured **continuous quality assurance** in CI pipelines, contributing to **stable and reliable software releases**

Client: STELLANTIS International Pvt Ltd, Bengaluru **May 2022 - June 2025**

Project: R2PX – Vehicle Software Integration (Instrument Cluster)

Environment: HIL

Roles and Responsibilities:

- ✓ Validated and ensured accurate display of alerts and system information on the **Instrument Cluster**.
- ✓ Analyzed Vehicle Function (VF) and requirement documents to create efficient test cases.
- ✓ Designed, implemented, and executed test cases using **IBM RQM** and **ECU Test Tool**.
- ✓ Conducted component and subsystem testing with **Vector Tools.**
- ✓ Reported defects using **RTC** and coordinated with development teams for prompt resolutions.
- ✓ Performed Regression, Delta Validation, and Sanity Testing to maintain system stability.

Milestones:

- ✓ Successfully designed and executed 500+ test cases, developed HIL benches, and automated test case migration to boost testing efficiency.
- ✓ Reported 50+ critical defects, improved requirement traceability, and streamlined validation using reusable scripts

Client: KPIT Technologies Ltd, Bengaluru **November 2021 - April 2022**

Project: MW Development Project

Environment: AUTOSAR Classic

Roles and Responsibilities:

- ✓ Configured **IPCOM** and **IPCABS** modules based on project requirements and design specifications.
- ✓ Performed code compilation and ensured the integrity of the build process.
- ✓ Conducted unit testing and component testing to verify the functionality of each module.
- ✓ Performed MISRA checks to ensure compliance with coding standards and safety requirements.
- ✓ Executed generation tool testing to validate the outputs from the code generation process.
- ✓ Ensured full traceability of requirements and implementation from design to testing phase.

Milestones:

- ✓ Successfully configured IPCOM and IPCABS modules, meeting all project requirements and improving system functionality.
- ✓ Improved validation efficiency by implementing reusable test scripts and enhancing traceability across the V-cycle

DECLARATION

I hereby declare that the information provided above is true and correct to the best of my knowledge and belief.

PAVAN KUMAR U
Bengaluru