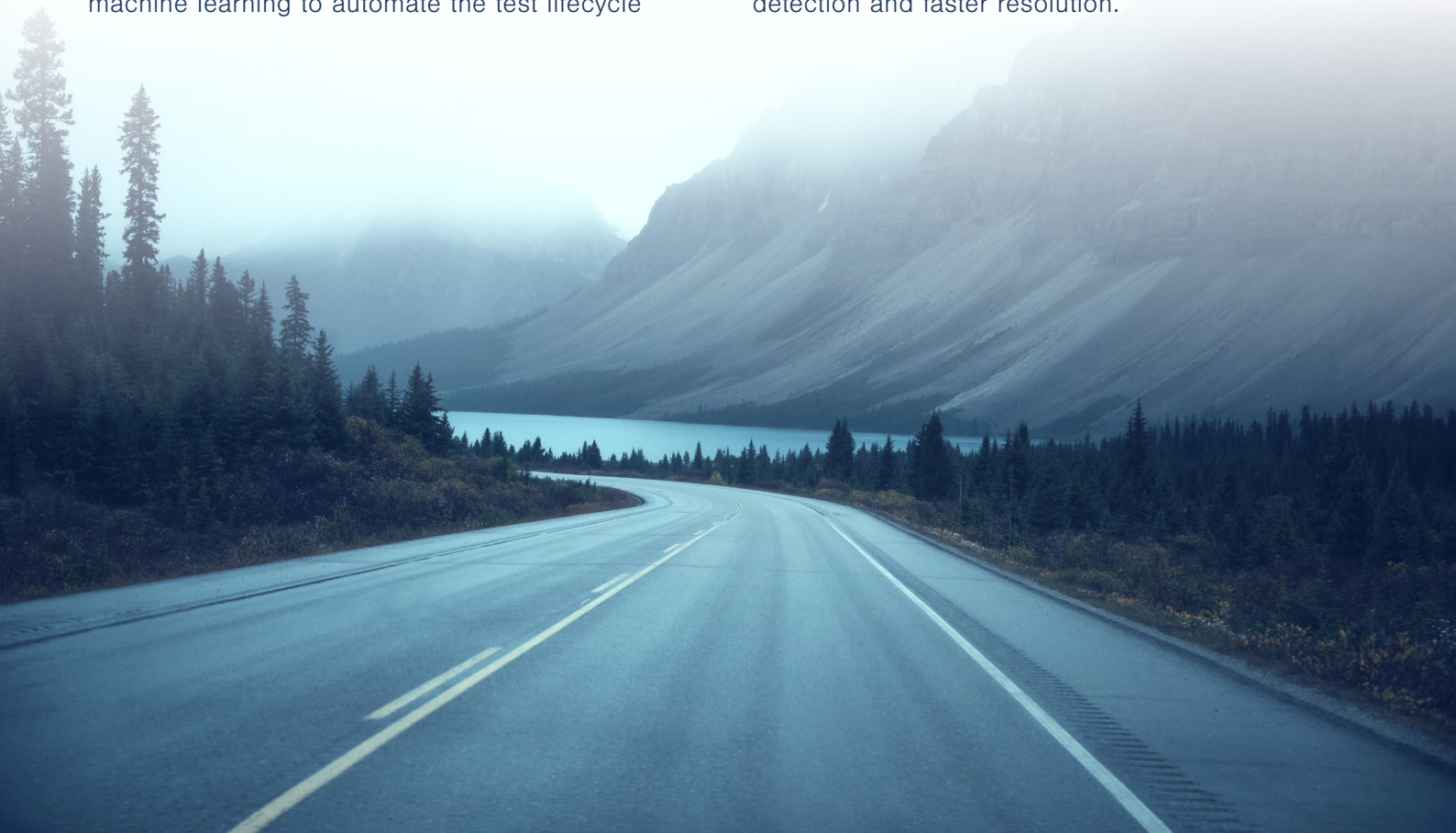


# Verification & Validation Expertise

Accelerating the journey to safe and reliable automobiles.

V&V approaches are evolving to address the challenges presented by software & services, personalization, autonomous driving, and connected & electric vehicles. This includes software/system requirements & integration testing, system health and performance profiling ensuring cybersecurity and functional safety of complex systems. V&V is embracing AI and machine learning to automate the test lifecycle

- intelligent test case generation, execution, and analysis, and advanced HIL systems and virtual environments to conduct time and cost-efficient testing before physical prototypes are built. Shift-left methodologies call for integrating V&V within DevSecOps pipelines, enabling continuous testing and security assessments throughout the development lifecycle leading to earlier bug detection and faster resolution.



# How Acsia Can Help?

## Thorough Testing Portfolio

Expertise in planning and executing software level to vehicle level tests across Digital Cockpit (IVI, IC, HUD), Telematics (TCU), EV (battery management, DC-DC chargers), AI (voice recognition, CARLA), ADAS, and Out-Car (mobile app, connectivity, cloud communications).

## In-House Test Automation Framework

Highly scalable and configurable internally developed tool capable of managing automated test runs for various ECU types, log analysis, sanity & regression, and image & language. Automated bug detection & environment/test failure reports. Integrated with real-time HMI touch automation framework (including test case generation) and Grafana (observability).

## ASPICE OML 3 Compliant Test Suite

Labs, simulators, tools, and know-how to perform Functional/Non-functional, Connectivity, Security & Safety, Application, Performance & Stability, Black Box, 24x7 Light-Out, FOTA/OTA, Integration, System, Software, SIL/MIL/HIL, Vehicle & Field testing.

Acsia's robust Verification & Validation capability helps OEMs to navigate the increasing complexity of modern vehicle features like ADAS, AD, and connected car technologies.

The intricate interplay between hardware and software necessitates deep expertise in establishing test infrastructure, automating software-to-vehicle level testing, and SIL/MIL/HIL simulation & testing to ensure the safety, reliability, and performance of vehicles.

# Why Acsia?



## Scalable VaaS

Highly scalable Verification/Validation as a Service spanning SW component/system/vehicle-level testing and enabling OEMs to shift left.



## Proven experience

Acsia has performed SIL/MIL/HIL simulations and testing for leading OEMs and Tier-I suppliers.



## Ready and Re-usable

Benefit from readily available modular components and test infrastructure and reusable test framework and licenses.



## Automation

AI/ML powered test automation framework capable of executing end-to-end test lifecycle from planning to reporting.



## Stringent Compliance

In-depth comprehension of the global regulatory requirements, and auto industry-specific standards (ASPICE, ISO 26262, VDA, SAE).





# What's In It For You



## Enhanced Safety

Rigorous V&V ensures vehicles meet stringent safety standards like ISO 26262 and ASPICE, minimizing risks and protecting lives.



## Reduced Costs

Early detection and resolution of defects during V&V lead to significant cost savings compared to fixing issues later in the development cycle.



## Faster Time-to-Market

Automated testing and streamlined processes accelerate V&V, enabling OEMs to deliver innovative features to customers faster.



## Improved Quality and Reliability

Through thorough V&V, OEMs can ensure their vehicles perform consistently and reliably, enhancing customer satisfaction and brand reputation.



## About Acsia Technologies

Acsia is a global leader in automotive software powering Digital Cockpits & Displays, e-Mobility, and Telematics. We use our expertise to develop tools and platforms that simplify complex problems and create safer, sustainable, and more compelling driver and passenger experiences. With a presence across the United States, Germany, Sweden, Japan, and India, we collaborate with top car makers and Tier-1 suppliers.



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