DE0291 Modern Computer-Based Validation of SOTIF Acceptance Criteria (ISO 21448)

Simulate your System with Bayesian Networks

ISO 21448 - *Safety of the Intended Functionality (SOTIF)* requires measurable acceptance criteria but does not tell us how to validate those.

This training is fully focused on practical answers how to …

- quantify performance limitations and risks
- identify hidden performance insufficiencies
- minimize uncertainty
- find unknown scenarios & rare hazardous events
- determine probabilities & occurrence rates of hazardous events
- model complex, multi-dimensional dependencies & conditional probabilities

Even brute-force simulation similar to computer games is not a solution, as it does not quantify uncertainties and statistical dependencies based on a solid mathematical foundation.

We provide you with a modern computer-based validation method of SOTIF acceptance criteria which scales to today´s real automotive systems and allows to simulate the complete system with parameters reflecting real-world scenarios.

Why Attend?

- Learn how to model uncertainty
- Overcome the limits to traditional risk assessment approaches
- Use new technology like Bayesian Networks for highly complex systems in real-world scenarios

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Who should attend?

- Product Owners, Function Owners, Domain Experts for AD Systems
- System & SW Engineers
- Experts for Functional Safety and SOTIF

Applicable for Autonomous Driving as well as for other areas that require quantitative risk analysis.

Duration:	2 days
Language:	Depending on the participants the training will be given in German or English. The training material will be in English
Location:	*exida.com* GmbH office Prof.-Messerschmitt-Str. 1 85579 Neubiberg / Germany or online
Certificate:	Each participant gets a letter of attendance.

For more information, please contact:

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Agenda and Content

- Motivation
  - Millions of km for Driving-Tests?
  - Limits of classic risk analysis & common cause
- Modern Methods – Basics & Theory
  - Essential Statistical Concepts – Quick Refresher
  - Model Statistical System Dependencies
  - Bayesian Networks
- Practical Application
  - Modeling a real SOTIF application
  - Simulation, System Optimization and Tuning

Accompanied by a practical example and hands-on exercises with Python & Jupyter

Prerequisites:

- Technical Background (Bachelor/Master level)
- Basic Programming Experience (Python or similar)

Recommended: Exercises can be performed on your own laptop (quick setup guidelines for Python are provided)

Takeaway:

After this training, you´ll be able to model and simulate SOTIF systems in real-world scenarios, to optimize and validate your system based on proven mathematical methods.