



Quality assurance for artificial intelligence

1 February 2023

IEEE SA and TÜV SÜD working together for AI quality

Munich. TÜV SÜD and IEEE SA, the Institute of Electrical and Electronics Engineers Standards Association, are pooling their knowledge and capacities to further the aim of designing responsible and safe artificial intelligence (AI) applications. The strategic partnership involves cooperation in the development of standards, training and certification programmes addressing all aspects of AI. Having already integrated the world's first AI ethics standard published by IEEE SA, TÜV SÜD services provide businesses with targeted support with their development of high-quality AI applications.

Applications with artificial intelligence capabilities are developing dynamically and becoming increasingly widespread, including sensitive areas. Yet many businesses find it challenging to develop high-quality AI applications, not to mention keeping an eye on the regulatory approaches under development. The EU's AI Act, which is expected to come into force in 2025, aims at ensuring comprehensive and extensive regulation of AI applications, and will cover a host of requirements in fields such as data privacy, safety and security, performance and sustainability. The upcoming act will regulate AI applications in the EU, striving to ensure their compliance with the EU's quality and ethics standards.

World's first standard for greater legal certainty

Given this, start-ups and established companies are well advised to address regulatory compliance from an early stage in the development of AI applications by putting in place Compliance by Design. The standards and services offered by IEEE SA and TÜV SÜD provide help with this task. IEEE SA has established an international standard in the form of its IEEE 7000 series, and a certifiable framework with its CertifAIEd™. Defining ethical requirements, the framework complements TÜV SÜD's broad approach to quality, which covers safety and security, data privacy and legal requirements as well as performance and sustainability criteria. Businesses using or developing AI applications can thus fall back on guidelines and training that are based on standards and support the development of market-conforming AI applications in a targeted manner.

Quality assurance and governance

Dr Andreas Hauser, CEO Digital Service at TÜV SÜD, explains, “The European Union’s AI Act references the requirements outlined in the TÜV SÜD and IEEE framework.” Given this, TÜV SÜD is confident that companies seeking to demonstrate compliance with regulatory requirements or social and market standards will gain a strategic advantage by using this framework. Hauser adds, “Organisations all over the world now have the opportunity to attend qualified training in order to build up the necessary understanding of AI quality and to determine and improve their AI quality readiness. Comprehensive quality management provides the ideal conditions for successfully scaling AI applications, ensuring compliance and demonstrating the responsible AI use.”

Creating awareness of ethical standards

Companies operating at international level have particular need of international proof of their responsible handling of AI technologies. To raise awareness and understanding of the importance of ethical challenges in the field of AI and identify solutions, the IEEE standard is initially being offered free of charge (the standard is available here: <https://standards.ieee.org/news/get-program-ai-ethics/>). By giving guidance, the standard can help AI developers to focus on people-centred AI throughout the development of AI applications, from the initial idea to the finished product or application.

TÜV SÜD services for AI Quality Management at a glance:

TÜV SÜD offers a host of services, supporting organisations with the development of people-centred, premium-quality AI applications that are in compliance with the applicable regulations.

The services include a range of **AI Quality Management training courses** (bookable here: <https://www.tuvsud.com/en/themes/artificial-intelligence/training>). A **Quality Readiness Check** shows companies the extent to which they are already in compliance with regulations and identifies areas where there is still need for action. **AI Quality Guided Assessment** goes one step further; taking a structured approach, it performs a customised risk assessment. The output is a quantitative and qualitative analysis of all quality criteria, including safety, security, ethical and legal aspects, performance and sustainability.

More information about the topic of AI and TÜV SÜD services in this field is available on the Internet at: <https://www.tuvsud.com/en/themes/artificial-intelligence> or on request by emailing: ai@tuvsud.com.

More information about IEEE CertifAled can found at:

<https://engagestandards.ieee.org/ieeecertifaled.html>.

The standard can be downloaded from: <https://ieeexplore.ieee.org/browse/standards/get-program/page/series?id=93>.

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