



TECHNOLOGY DESCRIPTION

Zander Labs has developed a cutting-edge neuroadaptive technology that transforms how humans interact with technology and how artificial intelligence (AI) systems are trained and learn. Through passive brain-computer interfaces and proprietary universal classifiers, Zander Labs' technology can detect mental states – such as workload, focus and intent – and translates them into actionable data. This results in a more intuitive, human-like interaction with systems and AI that learns faster based on human reasoning. The core of Zander Labs' technology lies in the algorithms trained on thousands of data sets to recognise and adapt to cognitive processes like attention, fatigue, focus and stress. The system's wearable precision electroencephalogram (EEG) sensors collect brain activity, which is processed directly on-device to ensure privacy and security.



INNOVATIVE ASPECTS

- The SAMANAI platform requires zero calibration, offering instant readiness with universal classifiers
- The lightweight Zypher sensor offers mobility and comfort, and ensures user privacy with on-device processing
- Universal classifiers adapt across individuals and devices, with broad applicability and no calibration required
- The technology adapts to human cognitive states in real time, creating a new layer of communication and understanding between humans and computers
- The technology is applicable in many sectors, i.e. enhancing autonomous driving systems, healthcare, defence and robotics
- The technology allows for multiple mental states to be monitored at the same time



TECHNOLOGY READINESS

TRL 5/6 (2025)

COUNTRY OF ORIGIN

Netherlands & Germany

LATEST UPDATE

03/2025

TAGS

#BrainComputer
Interface

#NeuroadaptiveAI

#CognitiveAI

#EEG
Processing

#Machine
Learning

#Neuroadaptive
Technology

APPLICATION AREAS

Software & AI

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Health

Automotive

Gaming

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