



Press release  
Communiqué de presse  
Comunicato stampa  
新聞稿 / 新聞稿  
プレスリリース  
보도자료

P4415S

## STMicroelectronics Streamlines Machine-Learning Software Development for Connected Devices and Industrial Equipment with Upgrades to NanoEdge™ AI Studio

- *New algorithms to better predict equipment anomalies and future behavior*
- *New capabilities to ease use of industrial sensor data acquisition and management using an ST development board*
- *Enhanced user interface to make machine-learning implementation easier for embedded developers with no data-science skills*

**Geneva, Switzerland, Dec 1, 2021 - STMicroelectronics (NYSE: STM)**, a global semiconductor leader serving customers across the spectrum of electronics applications, today announced the availability of Version 3 of NanoEdge™ AI Studio, the first major upgrade of the software tool for machine-learning applications that ST acquired with Cartesiam earlier this year.

The new version of [NanoEdge AI Studio](#) comes as the shift of AI capabilities from the cloud to the edge offers manufacturers phenomenal potential to fundamentally improve industrial processes, optimize maintenance costs, and deliver innovative functions in equipment that can sense, process data, and act locally to improve latency and information security. Applications include connected devices, household appliances, and industrial automation.

NanoEdge AI Studio simplifies the creation of machine learning, anomaly learning, detection and classification on any STM32 microcontroller. This new release also includes prediction capabilities such as regression and outliers libraries. The tool makes it easier for users to integrate such cutting-edge machine-learning capabilities quickly, easily, and cost-effectively into their equipment. No data-science expertise is needed.

Adding native support for all STM32 development boards, ST has also eliminated the need to write code for its [industrial-grade sensors](#) with new high-speed data acquisition and management capabilities. NanoEdge AI Studio software enhances security by using local data storage and processing, instead of transferring to, and processing data in, the cloud.

### What our customers say:

Steve Peguet, Scientific Director, Innovation Department of Alten Group, an international technology consulting and engineering company, said: *“We had the opportunity to use NanoEdge AI Studio with one of our major aerospace customers. For machine drilling during the manufacture of expensive parts, where a worn drill-bit or the slightest anomaly can have significant consequences, Alten used NanoEdge AI Studio to integrate Machine-Learning algorithms into the drilling equipment. The solution tested on a production line was so effective*

*that Alten has launched a practice around this technology to support its customers and to industrialize these first results to deploy a disruptive solution of drilling tools prescriptive maintenance in their factories.”*

David Dorval, CEO and founder of Stimio, a company specialized in development of industrial IoT solutions for the railway and other industries (IIoT), said: *“Our major railway customers are asking us to provide them with autonomous low-power wireless based predictive maintenance solutions to increase uptime, optimize costs and avoid costly downtime. The contribution of edge low-power AI is at the heart of our strategy and after benchmarking several Edge AI software solutions, we chose NanoEdge AI Studio from STMicroelectronics to enrich our Oxygen Edge offering with powerful low-power AI algorithms.”*

Deepak Arora, President & CEO of Wearable Technologies Inc, said, *“To protect our loved ones so that they can have a healthy and fulfilling life, NanoEdge AI is empowering us to reduce the Machine-Learning development time for our next-generation personal-safety devices. AI running at the edge on our devices will allow us to make informed decisions promptly with higher accuracy and reduced false-positives.”*

### **Key Features of NanoEdge™ AI Studio V3**

- Completely redesigned user interface to make it even easier for non-experts to develop state-of-the-art machine-learning libraries.
- New high-speed data acquisition and management on the [STWIN development board](#) making all industrial-grade sensors easily manageable without having to write a single line of code.
- Improved support for anomaly detection, particularly useful for predictive maintenance to anticipate wear-and-tear phenomena or to better deal with equipment obsolescence.
- Learn normality directly on [STM32 MCUs](#) using small dataset or use new algorithms to train on without ever seeing abnormal patterns before.
- Added regression algorithms to extrapolate data and predict future data patterns for energy management or forecasting remaining life of equipment.
- Native support of all STM32 development boards, no configuration required.

Additional information is available on the [ST website](#). Customers can reach out to [edge.ai@st.com](mailto:edge.ai@st.com).

You can also read our blogpost at <https://blog.st.com/nanoedge-ai-studio/>

STM32 is a registered and/or unregistered trademark of STMicroelectronics International NV or its affiliates in the EU and/or elsewhere. In particular, STM32 is registered in the US Patent and Trademark Office.

### **About STMicroelectronics**

At ST, we are 46,000 creators and makers of semiconductor technologies mastering the semiconductor supply chain with state-of-the-art manufacturing facilities. An independent device manufacturer, we work with more than 100,000 customers and thousands of partners to design and build products, solutions, and ecosystems that address their challenges and opportunities, and the need to support a more sustainable world. Our technologies enable

smarter mobility, more efficient power and energy management, and the wide-scale deployment of the Internet of Things and 5G technology. Further information can be found at [www.st.com](http://www.st.com).

**For further information, please contact:**

Michael Markowitz  
Director Technical Media Relations  
Tel: +1 781 591 0354  
Email: [michael.markowitz@st.com](mailto:michael.markowitz@st.com)