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STMicroelectronics unveils world's first MCU Edge-AI Developer Cloud

Benefits include access to online service to benchmark edge-AI models on STM32 boards

Geneva, Switzerland, January 30, 2023 – STMicroelectronics (NYSE: STM), a global semiconductor leader serving customers across the spectrum of electronics applications, is continuing to expand its solutions for embedded AI developers and data scientists with a new, industry-first set of tools and services to get edge AI technology on the market faster and with less complexity by aiding hardware and software decision-making. The [STM32Cube.AI Developer Cloud](#) opens access to an extensive suite of online development tools built around the industry-leading STM32 family of microcontrollers (MCUs).

“Our goal is to deliver the best hardware, software, and services to meet the challenges faced by embedded developers and data scientists so that they can develop their edge AI application faster and with less hassle,” said Ricardo De Sa Earp, Executive Vice President General-Purpose Microcontroller Sub-Group, STMicroelectronics. “Today we are unveiling the world’s first MCU AI Developer Cloud, which works hand-in-glove with our STM32Cube.AI ecosystem. This new tool brings the possibility to remotely benchmark models on STM32 hardware through the cloud to save on workload and cost.

Serving the growing demand for edge AI-based systems, the STM32Cube.AI desktop front-end includes the resources for developers to validate and generate optimized STM32 AI libraries from trained Neural Networks. This is now complemented by the STM32Cube.AI Developer Cloud, an online version of the tool, delivering a range of industry-firsts:

- An online interface to generate optimized C-code for STM32 microcontrollers, without requiring prior software installation. Data Scientists and developers benefit from the STM32Cube.AI's proven Neural Network optimization performance to develop edge-AI projects.
- Access to the STM32 model zoo, a repository of trainable deep-learning models and demos to speed application development. At launch, available use cases include human motion sensing for activity recognition and tracking, computer vision for image classification or object detection, audio event detection for audio classification, and more. Hosted on GitHub, these enable the automatic generation of “getting started” packages optimized for STM32.
- Access to the world’s first online benchmarking service for edge-AI Neural Networks on STM32 boards. The cloud-accessible board farm features a broad range of STM32 boards, refreshed regularly, allowing data scientists and developers to remotely measure the actual performance of the optimized models.

[STM32Cube.AI Developer Cloud](https://stm32ai-cs.st.com) [https://stm32ai-cs.st.com] is now freely available to registered MyST users.

The tool has been undergoing testing and evaluation by several embedded development customers.

"We have used STM32Cube.AI in the past with great success. It has allowed us to implement high-performing AI applications running on low-cost MCUs. Today we are glad to see that this product is further evolving by offering an online interface. This will allow us to evaluate performance of the AI models and choose a proper hardware architecture earlier in the process so we can converge more quickly on the development of AI applications. Overall, we are very happy with the services and support the ST AI team has been providing to us."

Toly Kotlarsky, Distinguished Member Technical Staff, R&D, **Zebra Technologies Corporation**

"The Model zoo, STM32Cube.AI online interface, and remote benchmarking capabilities on STM32 boards makes it easier for our data scientists with various hardware knowledge to evaluate embeddability of AI models into our products' microcontrollers. Additionally, being capable of testing our models on several STM32 microcontrollers in a few clicks enables us to consider embedded AI processing at an earlier stage in the design process and to take advantage of it to design advanced features."

Didier PELLEGRIN, VP AI Anticipation and Strategy, **Schneider Electric**

"The STM32Cube.AI Developer Cloud provides an easy way for our data scientists and embedded developers to collaborate and share their knowledge on embedded neural networks, which helps streamline our development process. The benchmarking feature also enables our data scientists to ensure that the models they create will run smoothly on microcontrollers. This allows us to remain competitive and provide the best solutions to our customers."

Johan A. Simonsson, Director AI Ideation & Research, **Husqvarna Group AI Labs**

"Thanks to STM32Cube.AI Developer Cloud, we can confirm in a very short time the validity of our approach to create a product with embedded AI. With the board farm we are able to confirm that our model works on a microcontroller. We are also able to choose the most appropriate STM32 by performing a remote benchmark on different STM32 boards. Overall, this addition to STM32Cube.AI is really welcome and will allow us to make more innovative products in the future."

Serge Robin, Microcontroller & Digital Components Expert Engineer, **Somfy**

"The use of the STM32 Model zoo can greatly ease machine-learning (ML) workflow and significantly shorten time to market by providing a collection of pre-trained models for STM32 microcontrollers that can be easily accessed and integrated into a new project, reducing the need for time-consuming training and experimentation."

Stephane Henry, Executive VP R&D, **Lacroix**

"We've been using the STM32Cube.AI from its early days and integrated the CLI in our development pipeline. The newest cloud-based REST API, with its Python wrapper/module, is going to dramatically lower the complexity of our CI/CD tooling maintenance. Combined with the exciting Model zoo, this new service is going to save time & empower our developers."

Sylvain Bernard, CEO, **SIANA Systems**

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About STMicroelectronics

At ST, we are more than 50,000 creators and makers of semiconductor technologies mastering the semiconductor supply chain with state-of-the-art manufacturing facilities. An integrated device manufacturer, we work with more than 200,000 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 connectivity. ST is committed to becoming carbon neutral by 2027. Further information can be found at www.st.com.

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