SensiML Launches Open Source Initiative to Drive TinyML Implementations for Smart IoT Applications

- Commercial IoT products require transparent and flexible open AI code to be supportable

- Open connectivity and data protocols remove barriers to AI sensor data collection efforts

- SensiML offering open data protocols, AI code embedded SDK library, datasets, and connectivity applications

PORTLAND, Ore., May 10, 2021 /PRNewswire/ -- SensiML™ Corporation, a leading developer of AI tools for building intelligent Internet of Things (IoT) endpoints, today announced that it has launched an [Open Source Initiative](#) to accelerate the adoption of TinyML smart sensing IoT applications. The initiative builds upon SensiML's existing efforts to design flexibility, transparency, and efficiency into its product suite by giving developers control and insight over vital aspects of their ML workflow, tools, data, and resulting models. SensiML's Open Source Initiative is the next logical step in the company's ongoing commitment to provide its embedded developers and partners with the confidence to build AI code into supportable, commercial IoT products.

The Benefits of Open Source Software for TinyML Applications
Developers integrating AI into any commercial product need both explainable and adaptable AI code to be able to truly support their products. By publishing file formats, interface protocols, reference data handling applications, embedded code functions, and reference datasets in open source, SensiML offers developers flexibility and assurance. SensiML provides the insight needed to enable developers to maintain control of their data and

firmware functionality while still leveraging all the power and benefits of SensiML's proprietary AutoML search engine technology to rapidly build optimized AI code for the IoT edge.

Four New Open Source Software Ingredients for TinyML Model Creation
SensiML's Open Source Initiative includes the introduction of four specific components for building AI at the IoT edge:

- **SensiML Open Gateway** – A fully open source, user-extensible, multi-protocol application for connecting embedded IoT sensor devices to SensiML's data collection tools for train and test data collection (SensiML Data Capture Lab and SensiML TestApp), as well as connectivity to cloud IoT platforms and other endpoints. [SensiML Open Gateway](#) is an easy-to-adapt connectivity tool that can be extended and modified quickly as it is written in platform-agnostic Python code. Out of the box, the application can accommodate many different connection types and sensor configurations. It also allows for easy customization as it can be tailored to meet user-specific needs for getting data out of the IoT/embedded sensor node and into AI software tools, cloud analytics, and application code running on PCs and smartphones.
- **SensiML Open Data Interfaces** – With support for both simple streaming binary output and full IoT device command/control using MQTT-SN, SensiML's application-level protocols for bringing sensor data into its tools are published and available using open source reference code examples. SensiML's project data can be easily imported and exported as CSV data at any time, and device configurations are defined using a published format (.DCLI) based on readily edited JSON attribute/value pairs.
- **SensiML Open Mobile TestApp** – This Android variant of the device testing tool is offered as open source software to support flexible options for data testing in mobile settings.
- **SensiML Open Source Embedded SDK** (coming later this summer) – The full library of SensiML segmenters, transforms, features, and classifiers as implemented by the AutoML and Python-based SensiML Analytics Toolkit Notebook will become available in open source format. The SensiML Open Source Embedded SDK will provide full insight and transparency of model operation and leverage the collective expertise of our partners, users, and the embedded and AI community at large to make available updates and platform-specific optimizations over time.

"Our industry-leading TinyML development software for creating smart IoT sensing applications and devices uses AutoML technology to allow developers to leverage ML with or without data science expertise," said Chris Rogers, CEO of SensiML. "With the introduction of SensiML's Open Source Initiative, we are making it easier than ever for developers to adopt AI at the IoT edge by removing two key barriers of unexplainable code behavior and unmodifiable AutoML firmware output from such tools."

Availability

The SensiML Open Gateway, Open Data Interfaces, and Open Mobile TestApp tools are all available now. The SensiML Open Source Embedded SDK will be released later this summer. For more information, visit https://sensiml.com/blog/open-source-initiative.

About SensiML
SensiML, a subsidiary of QuickLogic (NASDAQ: QUIK), offers cutting-edge software that

enables ultra-low power IoT endpoints that implement AI to transform raw sensor data into meaningful insight at the device itself. The company's flagship solution, the SensiML Analytics Toolkit, provides an end-to-end development platform spanning data collection, labeling, algorithm and firmware auto generation, and testing. The SensiML Toolkit supports Arm® Cortex®-M class and higher microcontroller cores, Intel® x86 instruction set processors, and heterogeneous core QuickLogic SoCs and QuickAI platforms with FPGA optimizations. For more information, visit www.sensiml.com.

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