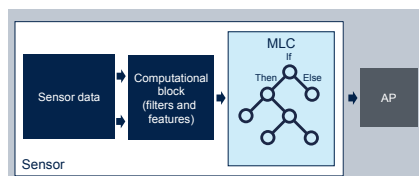


## Examples and tutorials for the embedded machine learning core (MLC)



### Features

- Examples and tutorials for the machine learning core feature
- Available in the STMicroelectronics public GitHub repository

### Description

The machine learning core (MLC) in STMicroelectronics sensors is an advanced feature that enables machine learning algorithms to run directly on the sensor. This allows for autonomous data processing and decision-making, reducing the need for continuous data transmission to a central processor, thus saving energy and bandwidth.

The MLC can execute decision-tree algorithms directly on the sensor, using configurable nodes defined by "if-then-else" conditions. Input signals, represented by statistical parameters derived from sensor data, are compared against predefined thresholds for real-time processing. The MLC can also generate interrupts for changes in the decision tree's results, allowing for immediate actions based on processed data. By processing data locally, the MLC enhances power efficiency by minimizing communication with the main processor.

Examples and tutorials for the machine learning core feature available on some STMicroelectronics sensors are provided in the STMicroelectronics public GitHub repository.

The repository contains MLC configurations covering various use cases and ready to be used with the sensors. It also contains tutorials describing how to create example solutions using different ST hardware kits and software tools. Further details are available in the README section of the GitHub repository.

Product summary	
Examples and tutorials for the embedded machine learning core (MLC)	<a href="#">MLC-Examples</a>

## Revision history

**Table 1. Document revision history**

Date	Version	Changes
08-Jul-2019	1	Initial release
05-May-2025	2	Updated title, <a href="#">Features</a> , and <a href="#">Description</a>

**IMPORTANT NOTICE – READ CAREFULLY**

STMicroelectronics NV and its subsidiaries ("ST") reserve the right to make changes, corrections, enhancements, modifications, and improvements to ST products and/or to this document at any time without notice. Purchasers should obtain the latest relevant information on ST products before placing orders. ST products are sold pursuant to ST's terms and conditions of sale in place at the time of order acknowledgment.

Purchasers are solely responsible for the choice, selection, and use of ST products and ST assumes no liability for application assistance or the design of purchasers' products.

No license, express or implied, to any intellectual property right is granted by ST herein.

Resale of ST products with provisions different from the information set forth herein shall void any warranty granted by ST for such product.

ST and the ST logo are trademarks of ST. For additional information about ST trademarks, refer to [www.st.com/trademarks](http://www.st.com/trademarks). All other product or service names are the property of their respective owners.

Information in this document supersedes and replaces information previously supplied in any prior versions of this document.

© 2025 STMicroelectronics – All rights reserved