ST LIVE DAYS

Live sessions

AI solution for People Counting Sensor with Schneider Electric (using a thermal Imager)

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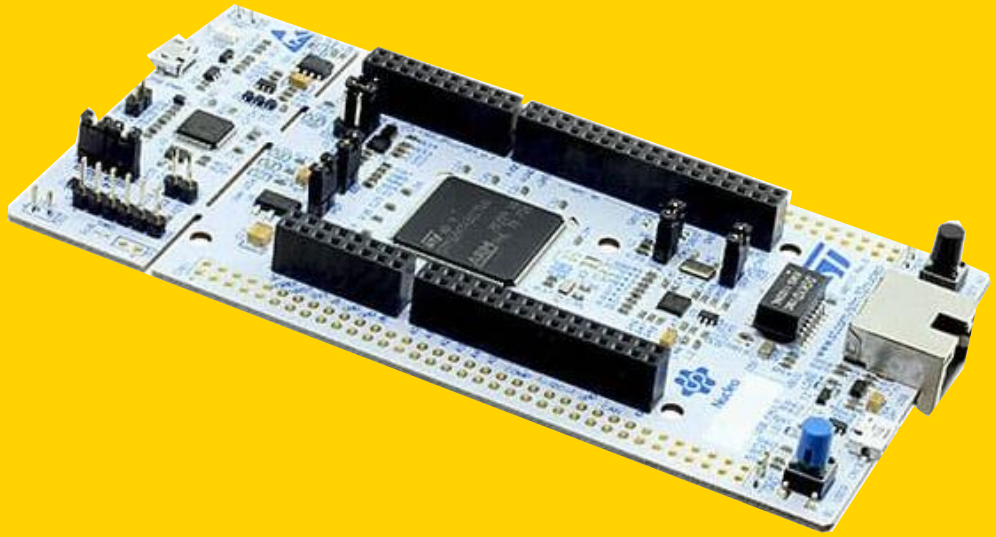
People counting demonstration installed in Schneider facilities

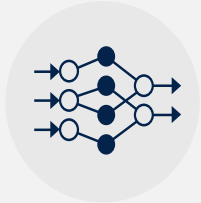
People flow detector (thermal camera) processed by the STM32H7 Neural Network

NUCLEO-H743ZI2
Schneider Electric People Counting Sensor



Easily implement Neural Networks on STM32

Train Neural Network using any major AI frameworks



TensorFlow Lite

ONNX

MATLAB

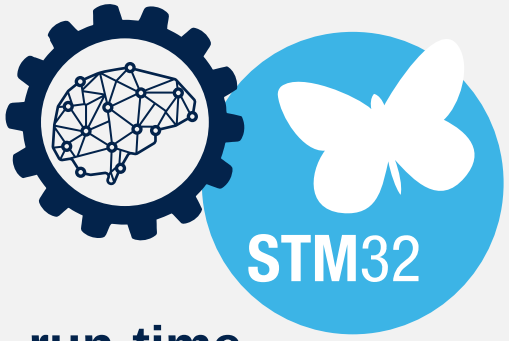
PyTorch

And more

Convert NN into optimized code

STM32 Cube.AI

Run on optimized runtime



run-time

Learn more on Neural Networks and STM32

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AI Solutions on STM32

A full development ecosystem to create your AI application

STM32 Cube.AI

AI extension for STM32CubeMX to **map pre-trained Neural Networks**

STM32 **Community** with dedicated Neural Networks topic and **AI expert partners**

Trainings, hands on, MOOCs and partners **videos**

FP-AI-VISION1

Person presence detection

Food classification

FP-AI-SENSING1

People activity recognition

Audio scene classification

FP-AI-NANOEDG1

Condition-based monitoring

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STM32 solutions for AI
Leverage the power of Edge AI

STM32 Cube.AI

Powerful ecosystem
Visit st.com/stm32cubeai

ST AI Expert team

ST AI Expert team
AI co-development partnerships
Contact us at edge.ai@st.com

Partner Program

Meet our expert partners
Contact us at edge.ai@st.com

People Flow Counting

Schneider Electric

Digital Attendance Monitoring

Queue monitoring

Affluence monitoring

Social distance monitoring

Bidirectional Counting

Respect of Privacy

Large Field of View

Embedded Artificial Intelligence

Low power

STM32 Nucleo

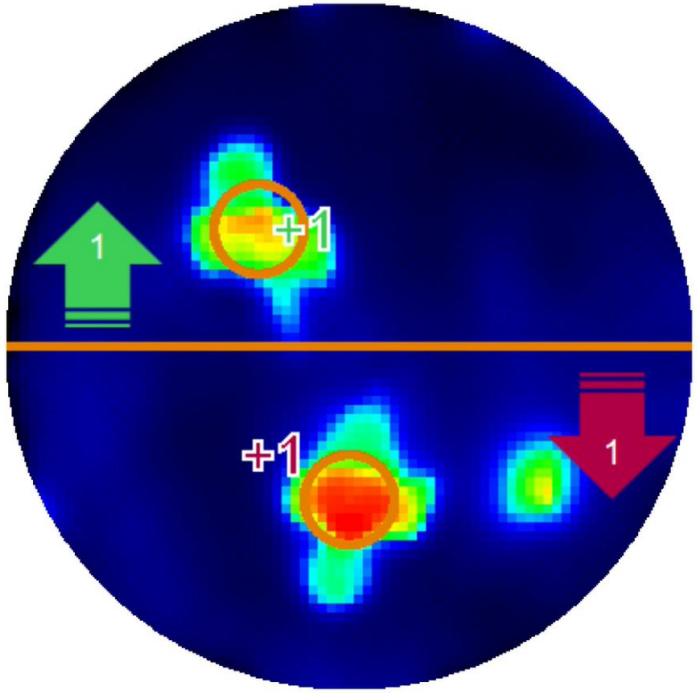

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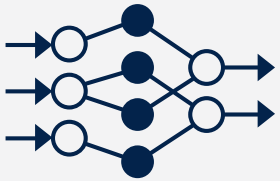
Image classification with FP-AI-VISION1 package

Full end-to-end optimized software example

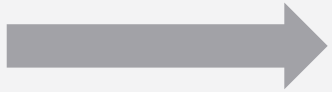
- from camera acquisition to image pre-processing before feeding the NN
- Multiple memory mapping possibilities to optimize and test impact on performances
- Retrain this NN with your own dataset
- Quantize your trained network to optimized inference time and memory usage

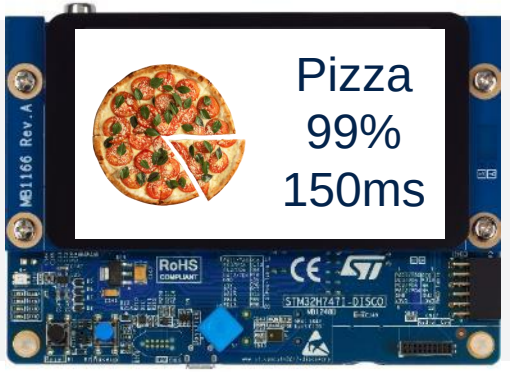
Enjoy the food classification demo

- Default demo based on 18 classes (224x224 RGB pictures)
- Several camera image output size possible



NN & example dataset provided





Embedded **image** pre-processing (SW) on the STM32H747

Inferences running on the microcontroller

Download the vision SW package

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To learn more about the solution

Chat online with Edge AI experts during ST Live Days (Nov. 19th)

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- Miguel Castro
- Raphael Apfeldorfer

Schneider Electric

- Maxime Loidreau

Thank you

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