

TensorFlow Lite for Microcontroller (TFLM)

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Chapter 1

2020 Edge AI , edge AI , TinyML TensorFlow Lite
, 2021 , STM32 NUCLEO_F103RB , FB Edge AI
Taiwan , , TensorFlow Lite for Microcontroller , ,
TensorFlow open source .

Chapter 2

Introducing TensorFlow Lite for Microcontroller (TFLM)

Google **TensorFlow** , CPU/GPU/TPU training , PC, Tensorflow Lite , IoT ARM M embedded MCU (micro-controllers) ROM/RAM , inference TensorFlow Lite for Microcontrollers (TFLM) , TinyML TensorFlow Lite .

(2021 3) , TFLM ():

- Arduino Nano 33 BLE Sense
- SparkFun Edge
- STM32F746 Discovery kit
- Adafruit EdgeBadge
- Adafruit TensorFlow Lite for Microcontrollers Kit
- Adafruit Circuit Playground Bluefruit
- Espressif ESP32-DevKitC
- Espressif ESP-EYE
- Wio Terminal: ATSAMD51

8CHAPTER 2. INTRODUCING TENSORFLOW LITE FOR MICROCONTROLLER (TFLM)

- Himax WE-I Plus EVB Endpoint AI Development Board
- Synopsys DesignWare ARC EM Software Development Platform
- **Hello World** - TensorFlow Lite for Microcontrollers , inference
sine
– Tutorial using any supported device
- **Micro speech** - , wake words: “yes”, “no”, “silence” “unkown”
– Tutorial using SparkFun Edge
- **Magic wand** - Captures accelerometer data to classify three different
physical gestures
– Tutorial using Arduino Nano 33 BLE Sense
- **Person detection** - Captures camera data with an image sensor to detect
the presence or absence of a person

Chapter 3

Hello world

Here is a review of existing methods.

Chapter 4

Methods

We describe our methods in this chapter.

Chapter 5

Applications

Some *significant* applications are demonstrated in this chapter.

5.1 Example one

5.2 Example two

Chapter 6

Final Words

We have finished a nice book.