

# TinyML Kit: HW Setup, SW Installation

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1

1

## TinyML Kit Installation

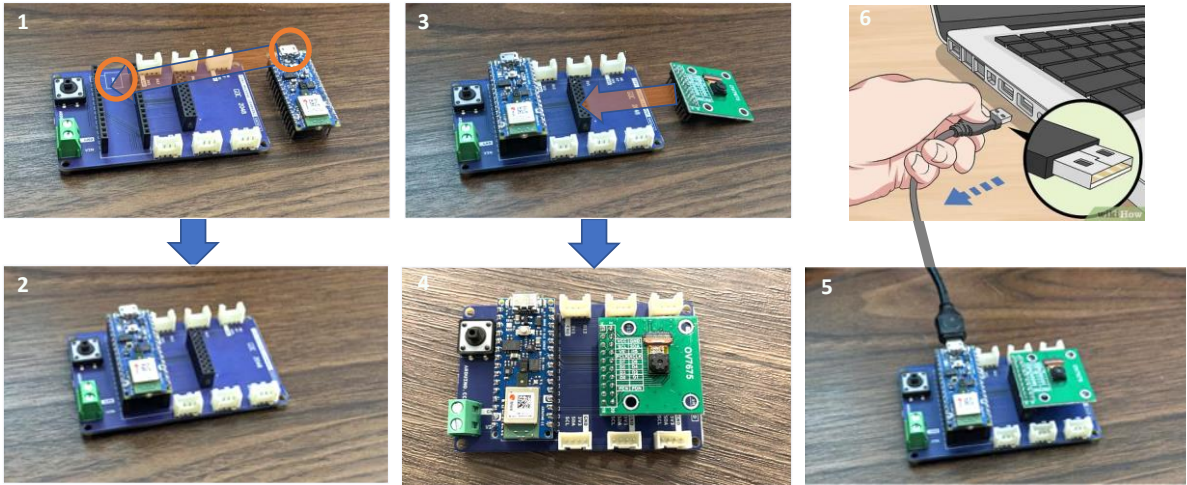
- Hardware Set-up
- Software Set-up



2

2

## Set-up the Hardware



3

## Download & Install Arduino IDE

<https://wiki-content.arduino.cc/en/software>

HARDWARE SOFTWARE CLOUD DOCUMENTATION COMMUNITY BLOG ABOUT

Arduino Web Editor

Start coding online and save your sketches in the cloud. The most up-to-date version of the IDE includes all libraries and also supports new Arduino boards.

CODE ON-LINE GETTING STARTED

Over-the-Air Updates DISCOVER MORE

Over-the-Air Updates DISCOVER MORE

### Downloads

**Arduino IDE 2.0.3**

The new major release of the Arduino IDE is faster and even more powerful! In addition to a more modern editor and a more responsive interface it features autocompletion, code navigation, and even a live debugger.

For more details, please refer to the [Arduino IDE 2.0 documentation](#).

Nightly builds with the latest bugfixes are available through the section below.

SOURCE CODE

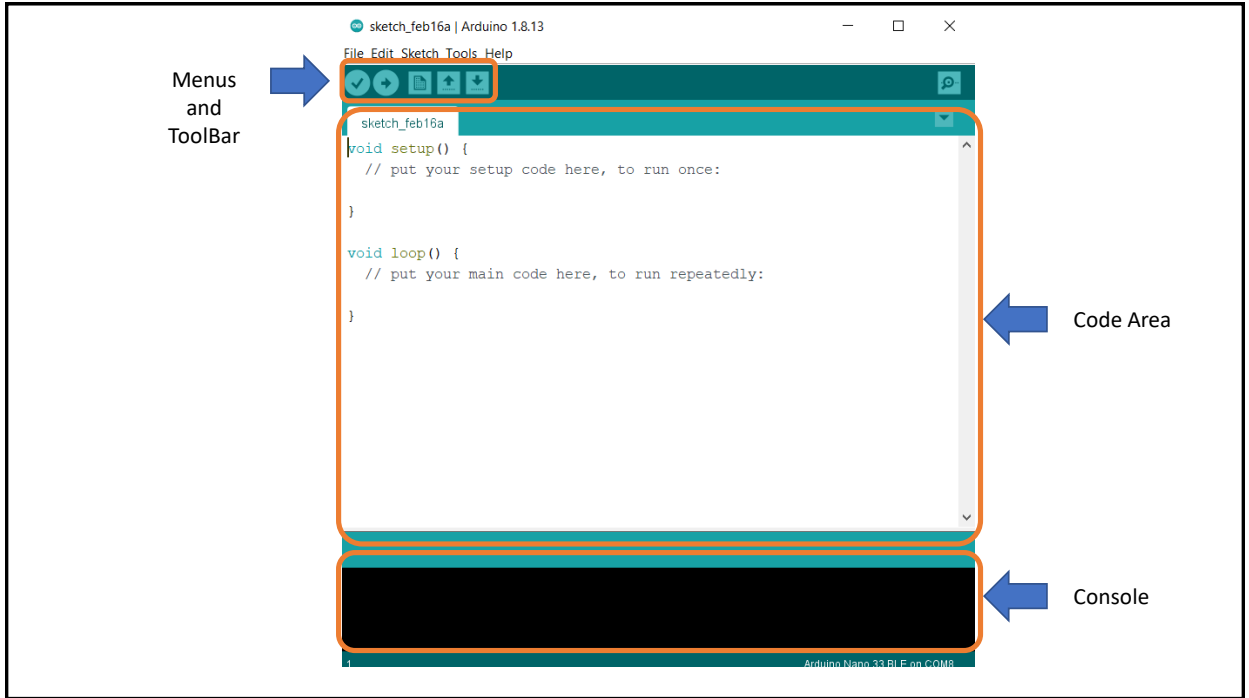
The Arduino IDE 2.0 is open source and its source code is hosted on [GitHub](#).

**DOWNLOAD OPTIONS**

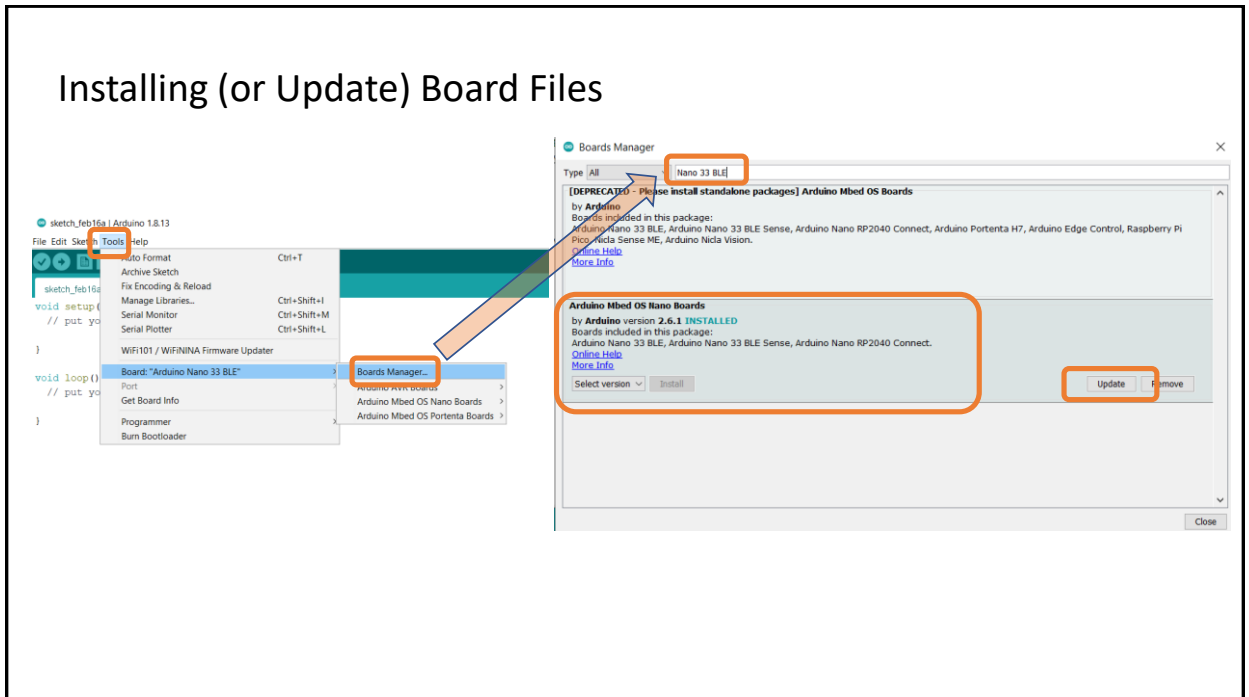
- Windows Win 10 and newer, 64 bits
- Windows MSI installer
- Windows ZIP file
- Linux AppImage 64 bits (386-64)
- Linux ZIP file 64 bits (386-64)
- macOS Intel, 15.14, "Mojave" or newer, 64 bits
- macOS Apple Silicon, 11, "Big Sur" or newer, 64 bits

Release notes

4

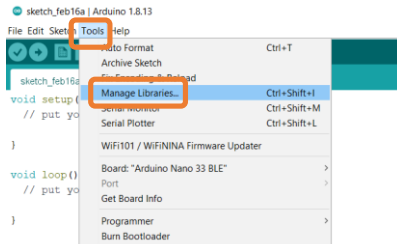


5

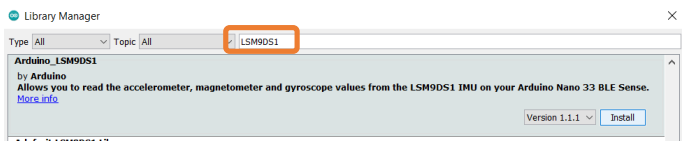
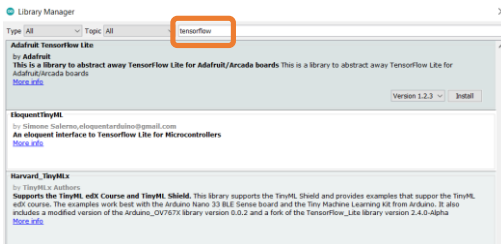


6

## Install the Main Libraries



Includes the OV767X library



**Note:** By default libraries are installed in:  
**C:\Users\Cristinel Ababei\Documents\Arduino\libraries**  
on a Windows machine.

7

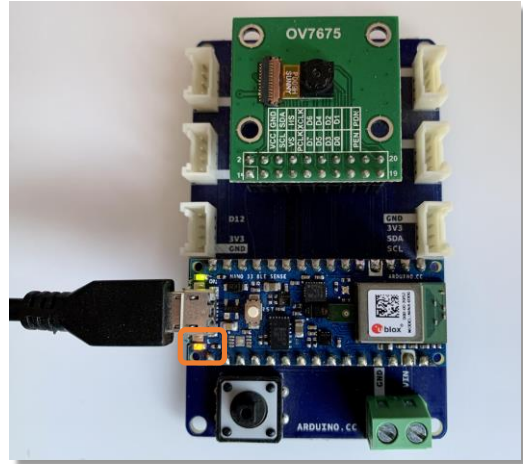
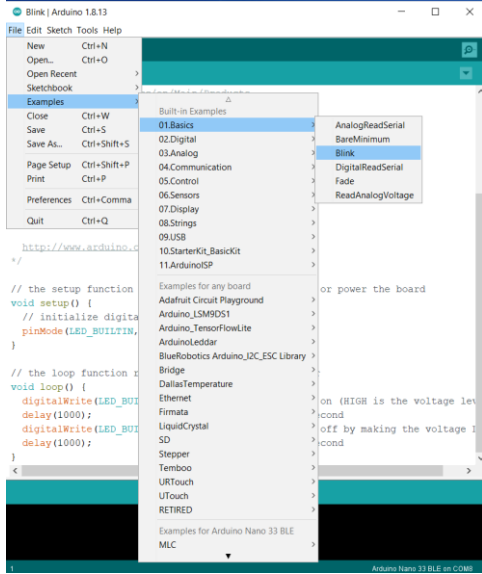
# TinyML Kit Tests – Part 1

- Installation Test: Blink LED
- RGB LED Test



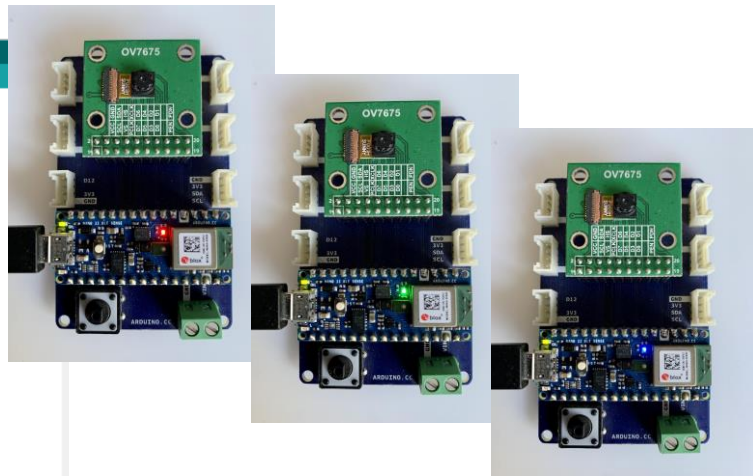
8

# Installation Test: Blink LED Example



9

# RGB LED Test



10

## Credits

- A previous edition of this course was developed in collaboration with Dr. Susan C. Schneider of Marquette University.
- We are very grateful and thank all the following professors, researchers, and practitioners for jump-starting courses on TinyML and for sharing their teaching materials:

- Prof. Marcelo Rovai - TinyML - Machine Learning for Embedding Devices, UNIFEI
  - <https://github.com/Mjrovai/UNIFEI-IESTIO1-TinyML-2022.1>
- Prof. Vijay Janapa Reddi - CS249r: Tiny Machine Learning, Applied Machine Learning on Embedded IoT Devices, Harvard
  - <https://sites.google.com/g.harvard.edu/tinyml/home>
- Prof. Rahul Mangharam – ESE3600: Tiny Machine Learning, Univ. of Pennsylvania
  - <https://tinyml.seas.upenn.edu/#>
- Prof. Brian Plancher - Harvard CS249r: Tiny Machine Learning (TinyML), Barnard College, Columbia University
  - [https://a2r-lab.org/courses/cs249r\\_tinyml/](https://a2r-lab.org/courses/cs249r_tinyml/)

11

11

## References

- Additional references from where information and other teaching materials were gathered include:

- Applications & Deploy textbook: “TinyML” by Pete Warden, Daniel Situnayake
  - <https://www.oreilly.com/library/view/tinyml/9781492052036/>
- Deploy textbook “TinyML Cookbook” by Gian Marco Iodice
  - <https://github.com/PacktPublishing/TinyML-Cookbook>
- Jason Brownlee
  - <https://machinelearningmastery.com/>
- TinyMLedu
  - <https://tinyml.seas.harvard.edu/>
- Professional Certificate in Tiny Machine Learning (TinyML) – edX/Harvard
  - <https://www.edx.org/professional-certificate/harvardx-tiny-machine-learning>
- Introduction to Embedded Machine Learning - Coursera/Edge Impulse
  - <https://www.coursera.org/learn/introduction-to-embedded-machine-learning>
- Computer Vision with Embedded Machine Learning - Coursera/Edge Impulse
  - <https://www.coursera.org/learn/computer-vision-with-embedded-machine-learning>

12

12