MicroPython: Beyond the pyboard

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MicroPython Ecosystem

• The pyboard is not the only microcontroller that can run MicroPython

• The code we've written can usually be ported to those controllers with minimal changes
New Pyboard D-series

PyBoard D-series
Image from: microptyhon.org

PyBoard D-series Breakout
Image from: microptyhon.org
ESP8266 & ESP32 Boards

• Processors by Expressif – https://www.espressif.com

• Both are Wi-Fi capable

• ESP32 adds Bluetooth LE (and faster processor)

• Both are available in a large number of boards
ESP8266-based Boards

SparkFun ESP8266 Thing
Image from: sparkfun.com

Adafruit Feather ESP8266
Image from: adafruit.com

Adafruit Huzzah ESP8266
Image from: adafruit.com

Wemos D1 mini
Image from: wemos.cc
ESP8266-based Boards

• SparkFun ESP8266 Thing
  https://www.sparkfun.com/products/13711

• Adafruit HUZZAH ESP8266
  https://www.adafruit.com/product/2471

• Adafruit Feather HUZZAH ESP8266
  https://www.adafruit.com/product/2821

• Wemos D1 mini
  https://wiki.wemos.cc/products:d1:d1_mini

• Many others on AliExpress or eBay
ESP32-based Boards

SparkFun ESP32 Thing  
Image from: sparkfun.com

Pycom WiPY 3.0  
Image from: pycom.io

Wemos D32  
Image from: wemos.cc
ESP32-based Boards

• SparkFun ESP32 Thing
  https://www.sparkfun.com/products/13907

• Pycom family of boards: WiPy, LoPY, SiPy, GPy, FiPy
  https://pycom.io/webshop/#dev

• Wemos D32
  https://wiki.wemos.cc/products:d32:d32

• Development boards directly from Expressiif

• Many others on AliExpress or eBay
M5 Stack

- http://www.m5stack.com
- Full suite of solutions for Internet of Things designs
- Can program in several languages, including MicroPython

Image from: m5stack.com
CircuitPython

- https://www.adafruit.com/circuitpython
- https://learn.adafruit.com/category/circuitpython

- Developed by Adafruit for their custom boards
- Based on MicroPython
  - Core Python parts are the same
  - How to interface with sensors, etc. is different