

Fri3d Badge - Software in notendop

Fri3d 2026 – Vrijdag 14-8-2026

Overzicht als pyramide



- MicroPythonOS ota_0
- MicroPythonOS ota_1
- Retro-Go
- Duke Nukem 3D
- LittleFS2

Overzicht als straat



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MicroPythonOS

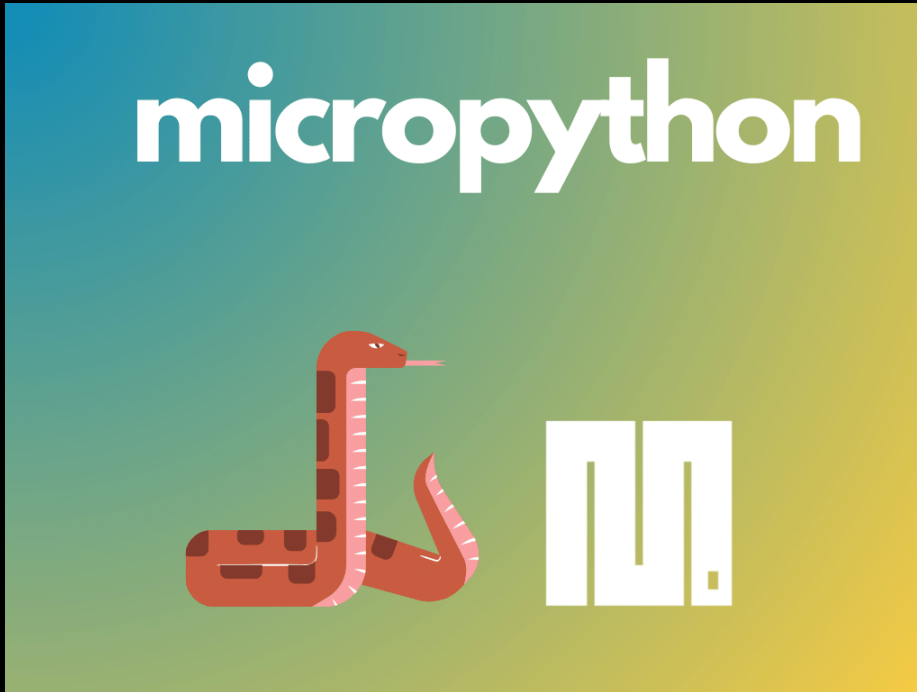
Korte inleiding

MicroPythonOS



- Geboren 2024
- Doel: op microcontrollers gemakkelijk
 - Apps ontdekken
 - Apps installeren
 - Apps maken
- Inspiratie: Android

Programmeertaal: MicroPython



- Sinds 2014, ESP 2017
- Verrassend snel
- Veel code beschikbaar
- Ook desktop (native)
- Snel itereren
- 99% like CPython

LVGL maakt het mooi



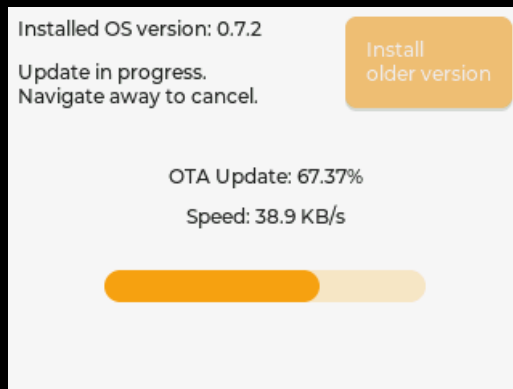
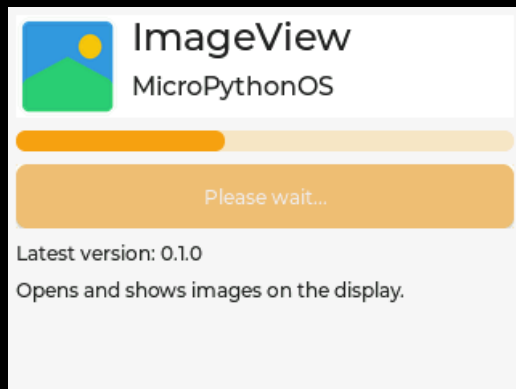
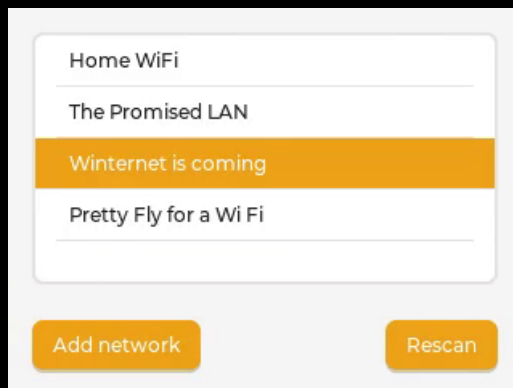
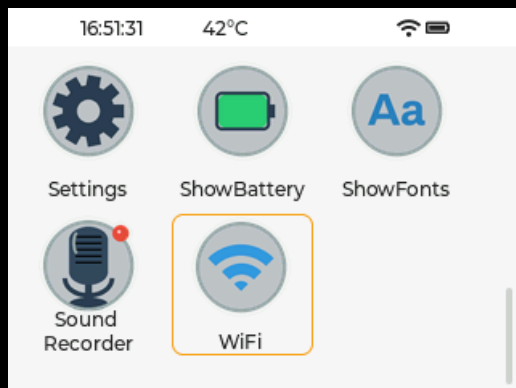
- Licht en snel
 - 30+ Widgets
 - Animaties
 - Afbeeldingen
 - UI Editor
 - MicroPython bindings
- Credit: lvgl_micropython

Laagjes



- Apps
- 27 Frameworks:
MicroPython
- High-level drivers:
MicroPython and C
- MicroPython Runtime
- Low-level drivers:
FreeRTOS, Darwin, Linux

Screenshots



- Launcher
- WiFi + Auto-Connect
- AppStore
- OSUpdate
- File Manager
- Settings
- About

Documentatie

MicroPythonOS Documentation

Welcome to the official documentation for **MicroPythonOS**, a lightweight and versatile operating system built entirely in MicroPython. Designed for microcontrollers like the ESP32 and desktop systems, MicroPythonOS offers a modern, Android-inspired interface with an app ecosystem, App Store, and Over-The-Air (OTA) updates.

To see MicroPythonOS in action, check out the screenshots and screen videos on the [main website](#).

About MicroPythonOS

MicroPythonOS is tailored for developers and innovators building IoT devices, smart wearables, educational tools, and more. Its key features include:

- **Native MicroPython:** Write apps and drivers in MicroPython for rapid development.
- **Cross-Platform:** Runs on ESP32 microcontrollers, Linux desktops, and potentially MacOS and Raspberry Pi.
- **Modern UI:** Android-like touch screen interface with gestures.
- **App Ecosystem:** Built-in apps and an App Store for easy expansion.
- **OTA Updates:** Seamless system and app updates.

This documentation provides everything you need to get started, understand the architecture, build the system, and develop apps.

Who This Is For

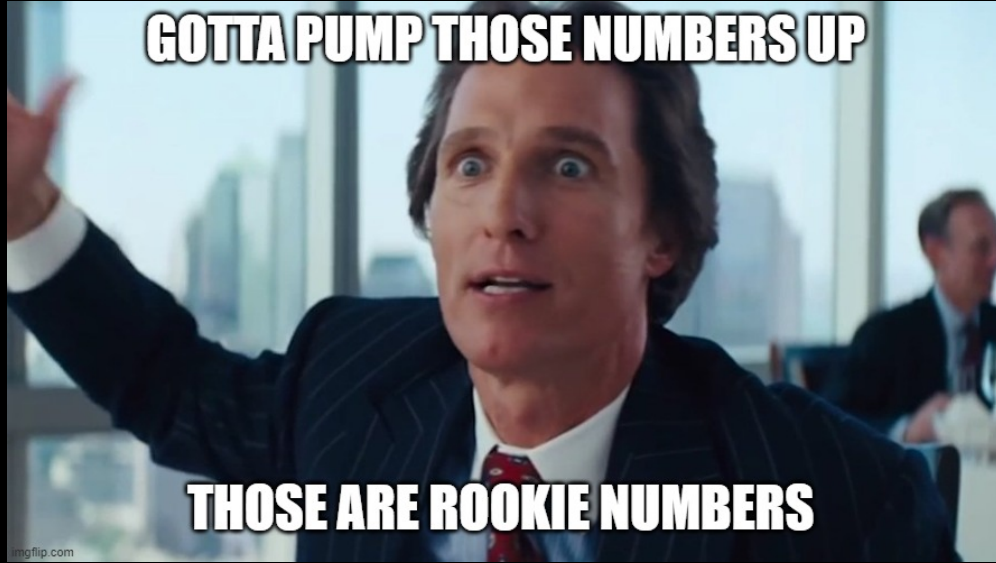
- **Developers:** Learn how to install, build, and extend MicroPythonOS with new apps and features.
- **Managers:** Explore the system's capabilities, supported hardware, and ready-to-use features for prototyping and production.

Getting Started

New to MicroPythonOS? Start [here](#).

- Alle 27 frameworks gedocumenteerd
- Nog niet in framework:
 - Bluetooth Low Energy
 - LoRa
 - Power Management
- Zijn wel te gebruiken!

MicroPythonOS in Numbers



- GitHub contributors: 24
- Apps: 50+
- GitHub vorken: 91
- Community Chat: 179
- GitHub sterren: 746
- Code commits: 3914

Meer weten



- MicroPythonOS.com
 - [chat.MicroPythonOS](https://chat.MicroPythonOS.com)
 - Zit op Telegram
 - [install.MicroPythonOS](https://install.MicroPythonOS.com)
 - [web.MicroPythonOS](https://web.MicroPythonOS.com)
 - [docs.MicroPythonOS](https://docs.MicroPythonOS.com)

MicroPythonOS

Op Fri3d Camp

Fri3d Camp 2024



- 296x240
- 2 inch screen
- IMU
- Buzzer
- Multicolor LEDs
- Communicator

Fri3d Camp 2026



- 320x240
- 2.8 inch display
- Capacitive Touch
- Audio Jack
- LoRa
- Communicator

Fri3d Badge startpunten



- fri3dcamp.github.io/badge_2026/
- Slack chat
- Discord chat
- github.com/fri3dcamp/badge_firmware_MicroPythonOS

Web apps door Sebastiaan

 **FLASHER**

NEDERLANDS ADVANCED MODE ☐

FLASH YOUR FRI3D HARDWARE

Choose a badge or peripheral and install firmware.

FLASH A BADGE

ESP32 · WebSerial

FLASH FIRMWARE ON YOUR BADGE

1.3.2 · Badge 2026 · 16.0 MB

[Help](#) [DOWNLOAD AND FLASH](#)

FLASH A PERIPHERAL

WCH · WebUSB

COMMUNICATOR 2026

1.0.2 · 8.9 KB

[Help](#) [FLASH LATEST](#)

DJ ADDON 2026

1.0.3 · 10.4 KB

[Help](#) [FLASH LATEST](#)

Fri3d Web Flasher

Fri3d-IDE Save & Run

[Install Fri3d-IDE as app](#)

Welcome x +

Welcome to Fri3d-IDE

MicroPython IDE for the Fri3d Camp 2026 badge.

Guided tours

Step-by-step tours that walk you through the IDE.

Build my first app
Create an app with a step-by-step coding guide beside the editor.

Install an app from BadgeHub
Browse and install a compatible badge app.

Connect my badge
Use USB to connect a physical Fri3d badge.

Try the virtual badge
Explore MicroPythonOS without hardware.

Or skip the tours and connect directly:

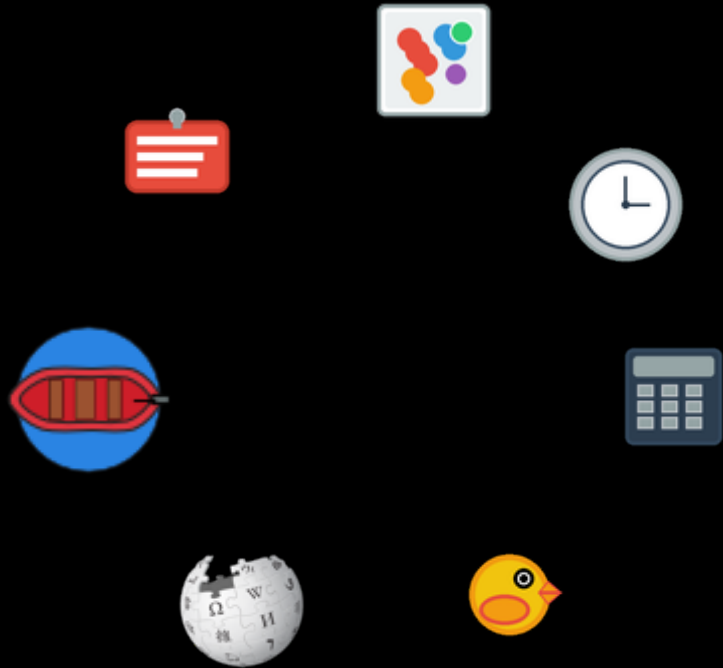
[Connect device](#) [Connect to virtual badge](#)

[What's new in v1.2.2](#)

Terminal

Fri3d-IDE

Workshop: Maak een app met AI



- “Sfeer coderen”
- Opencode
- VSCodium
- Vrijdag 14-8-2026
- 13:30h
- “Low Voltage” locatie
- Quasi Kili

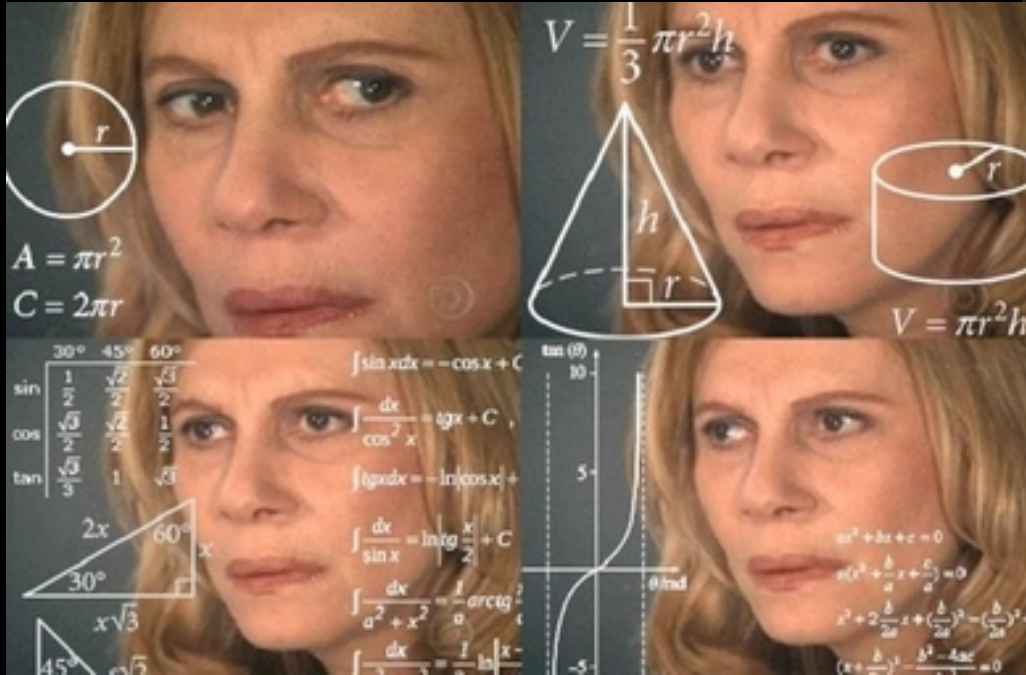
Workshop: Programmeer je badge (intro)



- Vrijdag 14-8-2026
- 16:00u
- Locatie: Berkenhof
- Joram Agten

Workshop: Programmeer je badge (advanced)

- Zaterdag 15-8-2026
- 20:00u
- Locatie: Coderdojo
- Joram Agten

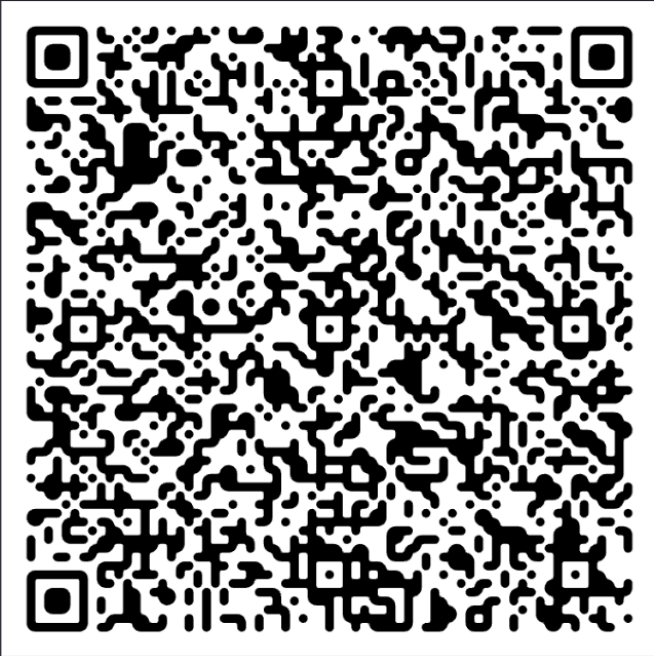


Tips



Channel

fri3d



Scan the QR code to join the channel

- Nostr Chat
 - Groepschat: fri3d
 - Ook op smartphone
 - 0xchat
 - Amethyst
- Settings
 - Notifications
 - Startup sound

Problemen?



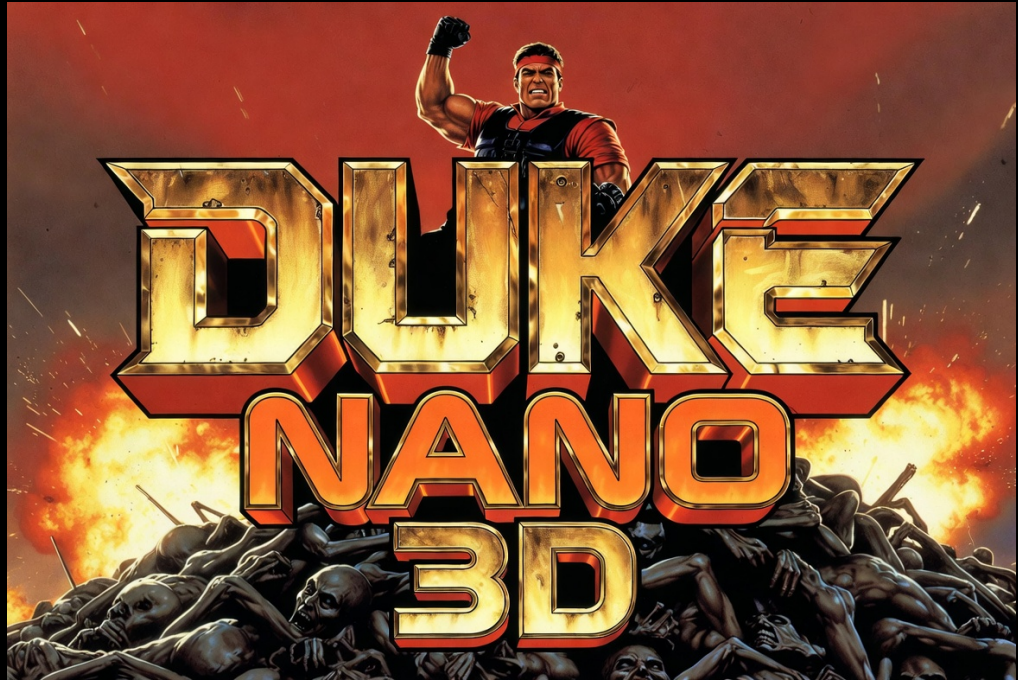
- OSUpdate naar 0.17.2
 - Error? Herstart
- AppStore updates
 - Error? Herstart
- Soms even wachten
- Badge Recovery Station
 - in badge tent
 - makkelijkste

Partitie: Retro-Go



- Nintendo Entertainment System
- GameBoy + Color
- Game & Watch
- Sega Master System
- Game Gear
- Coleco ColecoVision
- NEC PC Engine
- Atari Lynx

Partitie: Duke Nukem 3D



- Duke "Nano" 3D
- 11 MiB Shareware
- 3.70 MiB PNG+ADPCM
- 2.60 MiB zipped
- 1.92 MiB lossy
- 1.68 MiB Level 1-4
- Koptelefoon

LittleFS2



- Slijtage spreiden
- Geen corruptie na uitval
- WiFi /prefs
- Game /roms
- Voorbeeld /apps
- Voorbeeld /data

Vragen ?

Bedankt en veel plezier!
