Introducing Bangle.js (the NodeWatch)

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"any application that can be written in JavaScript, will eventually be written in JavaScript."

Atwood's Law
https://blog.codinghorror.com/the-principle-of-least-power

https://banglejs.com/

NodeWatch

The world's first hackable open source JavaScript-powered and TensorFlow-powered smartwatch

https://nodewatch.dev/

NodeConf EU 2019

NODECONF EU 2019

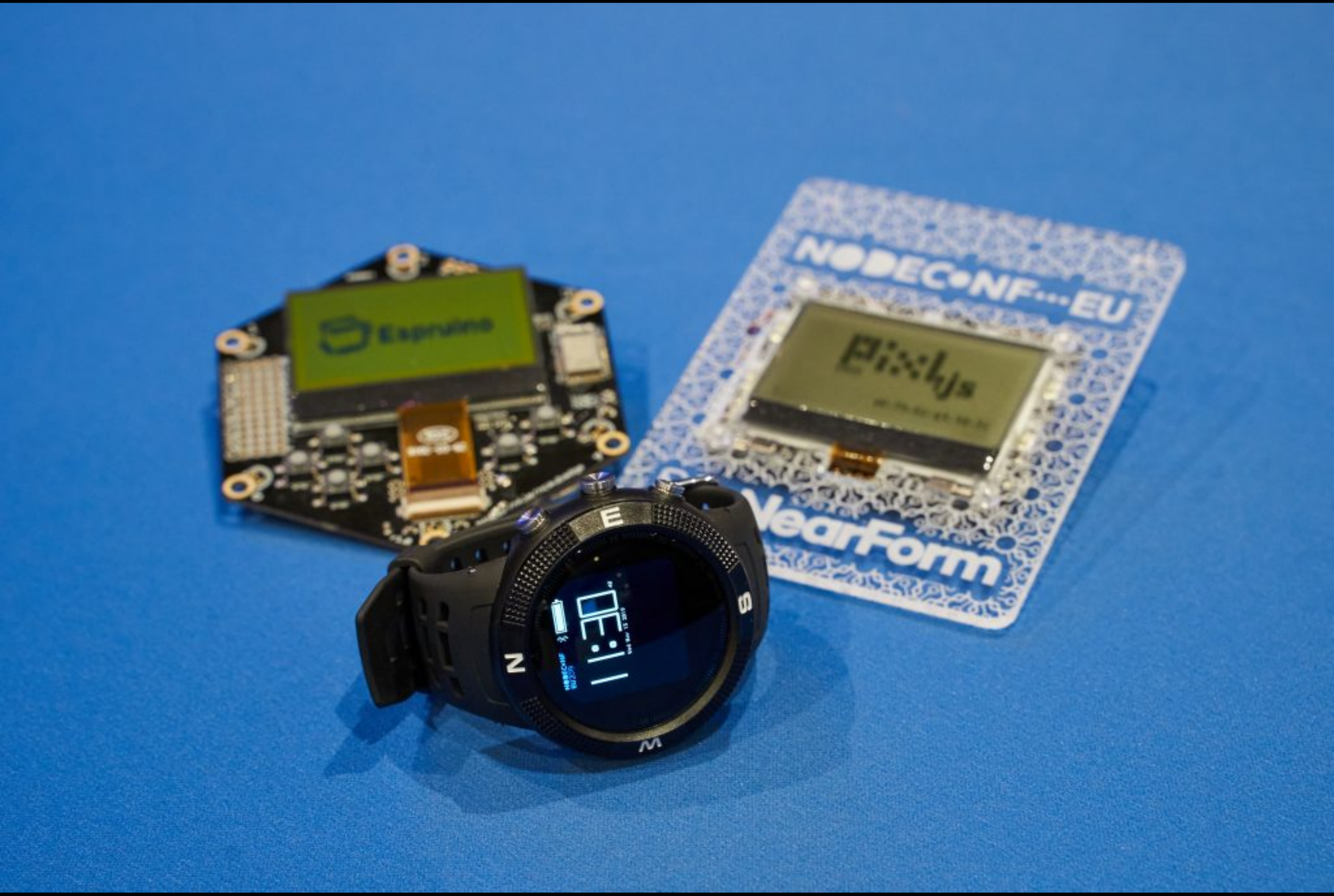
Say hello to Bangle.js. Get started with your Bangle.js on nodewatch.dev

Powered by TensorFlow

Powered by Espruino

Sponsored by NearForm

With love from NearForm RESEARCH


Espruino
NODECONF...EU
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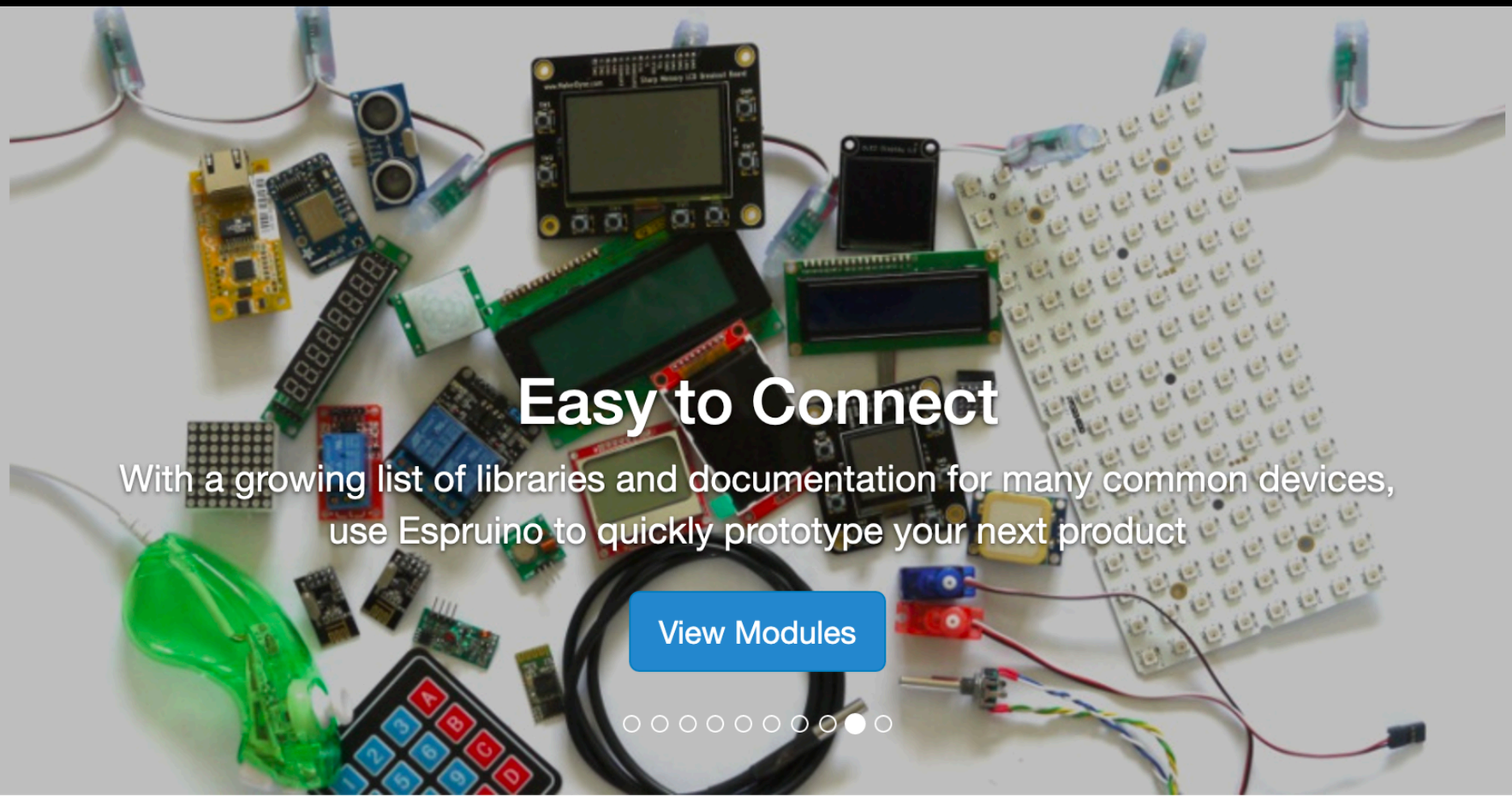
NodeWatch

Hardware

High-Level Hardware

- Nordic Semiconductor NRF52832 SoC with Bluetooth LE 4.2
- KX023 accelerometer
- 3 axis compass
- BD 1668 heart rate monitor
- 32 mbit flash - similar command set to this
- 240x240 Colour LCD
- Holtek touch controller - bs83a02a with 2 zone on/off
- GPS UBX-M8130, ROM CORE 3.01, PROTVER=18.00*11
- Buzzer

https://nodewatch.dev/software



Got my @Espruino running nicely in 15 mins on Win 8.1. This is the perfect hardware to introduce students to ICT in schools.

by Ward De Backer —

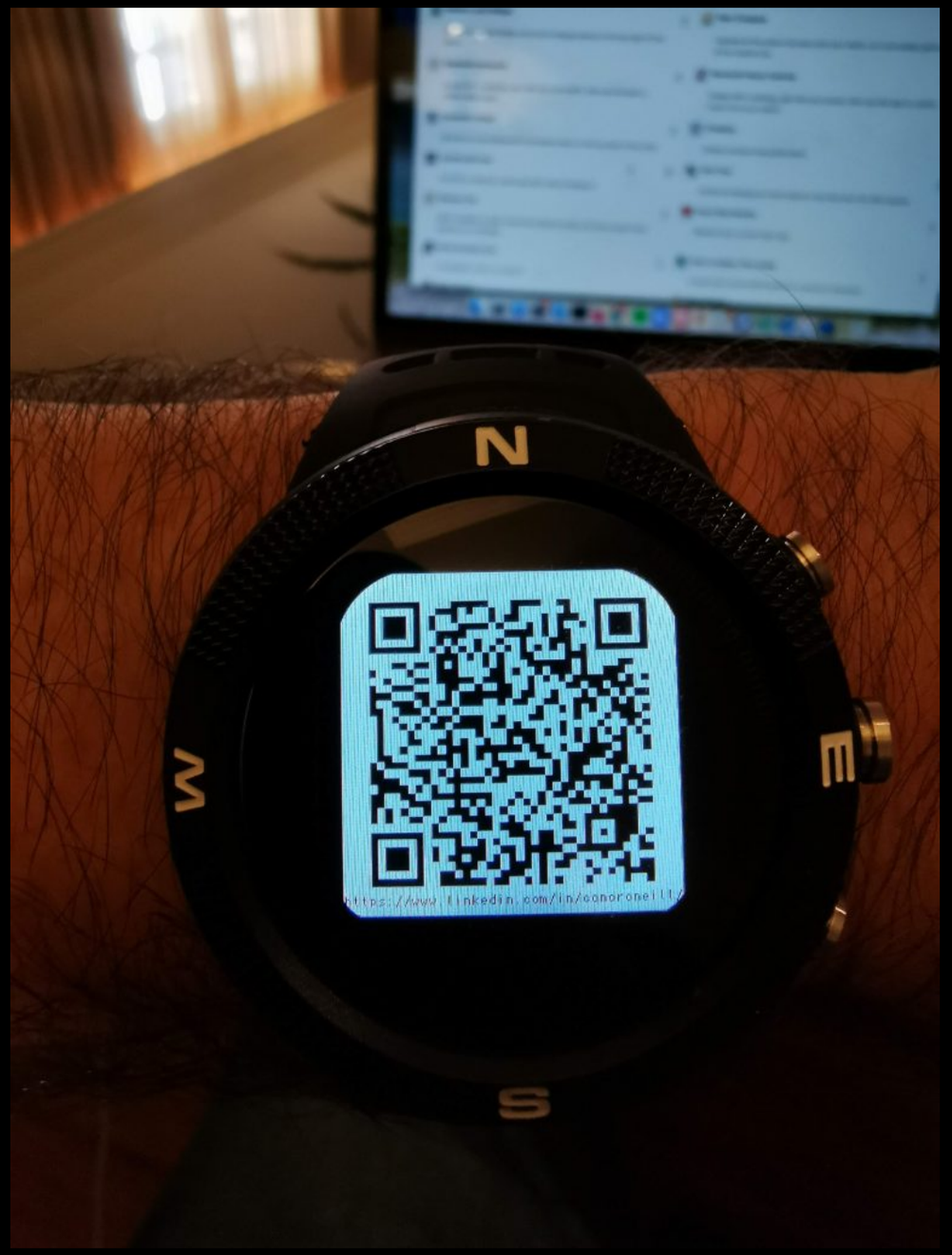
JavaScript

Responsive

Fully Open Source

Crowdfunded

http://www.espruino.com/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Game Over!

Bangle.js App Loader

Connect

Library 53 | My Apps | My files | About

All | Clocks | Games | Tools | Widgets | Bluetooth

Keywords... Search

Bootloader (0.03)

This is needed by Bangle.js to automatically load the clock, menu, widgets and settings

Centerclock (0.01)

Watch-centered digital 24h clock with date in dd.mm.yyyy format.

Morphing Clock (0.01)

7 segment clock that morphs between minutes and hours

Settings (0.02)

A menu for setting up Bangle.js - by default this disables Bluetooth unless you enable 'BLE' AND 'Dev'

NCEU 5K Fun Run (0.01)

Display a map of the NodeConf EU 2019 5K Fun Run route and your location on it

NCEU Logo Widget (0.01)

Show the NodeConf EU logo in the top left

NCEU Startup (0.01)

NodeConfEU 2019 Startup Sequence

3x2 Pixel Clock (0.01)

This is a simple clock using minimalistic 3x2 pixel numerical digits

Analog Clock (0.01)

An Analog Clock

App Manager (0.01)

Show currently installed apps, free space, and allow their deletion from the watch

Asteroids! (0.01)

Retro asteroids game

BLE Scanner (0.01)

Scan for advertising BLE devices

Battery Level Widget (0.01)

Show the current battery level and charging status in the top right of the clock

Beer Compass (0.01)

Uploads all the pubs in an area onto your watch, so it can always point you at the nearest one

Berlin Clock

Berlin Clock (see https://en.wikipedia.org/wiki/Mengenlehreuhr)

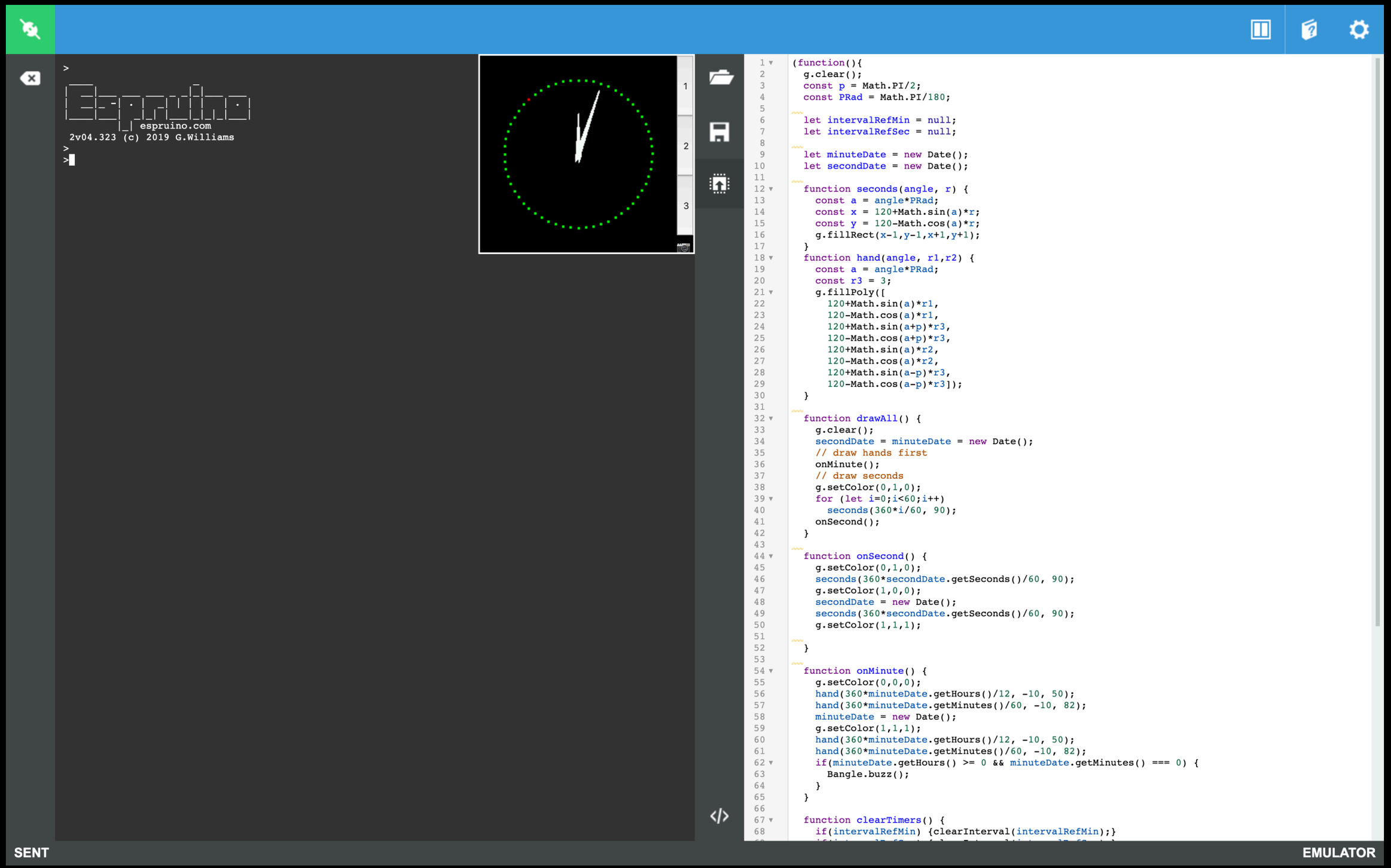
Binary Bluetooth Keyboard (0.01)

Enable HID in settings, pair with your phone/PC, then type messages using the onscreen keyboard by tapping repeatedly on the key you want

Binary Clock (0.01)

Bluetooth Keyboard (0.01)

https://banglejs.com/apps/



https://www.espruino.com/ide/emulator.html

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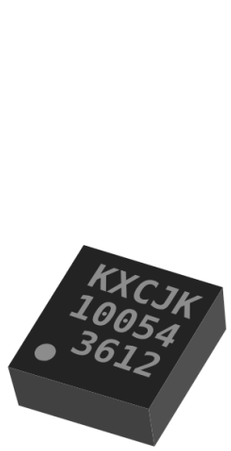
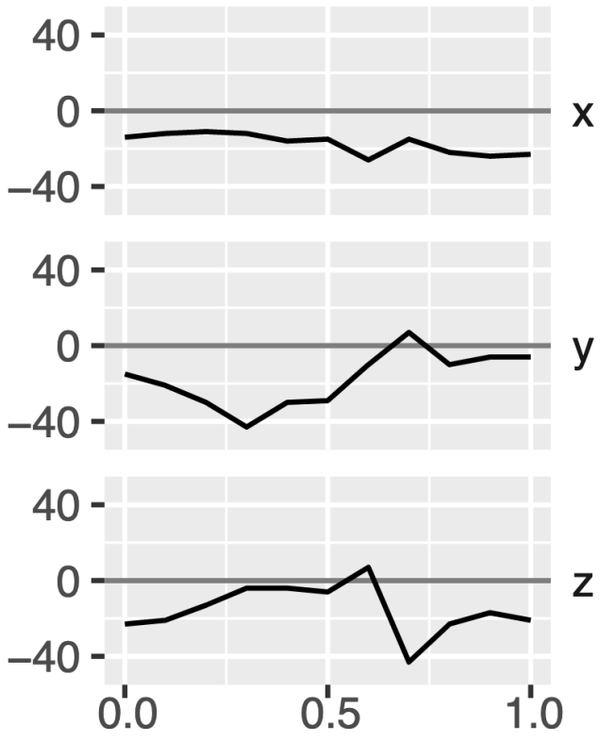
Powered by
TensorFlow

onboard accelerometer	provides realtime data	analyzed on System-on-Chip by TensorFlow	classify into hand-gesture





TensorFlow
Lite for Microprocessors

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Swipe_left
Swipe_right
...
random
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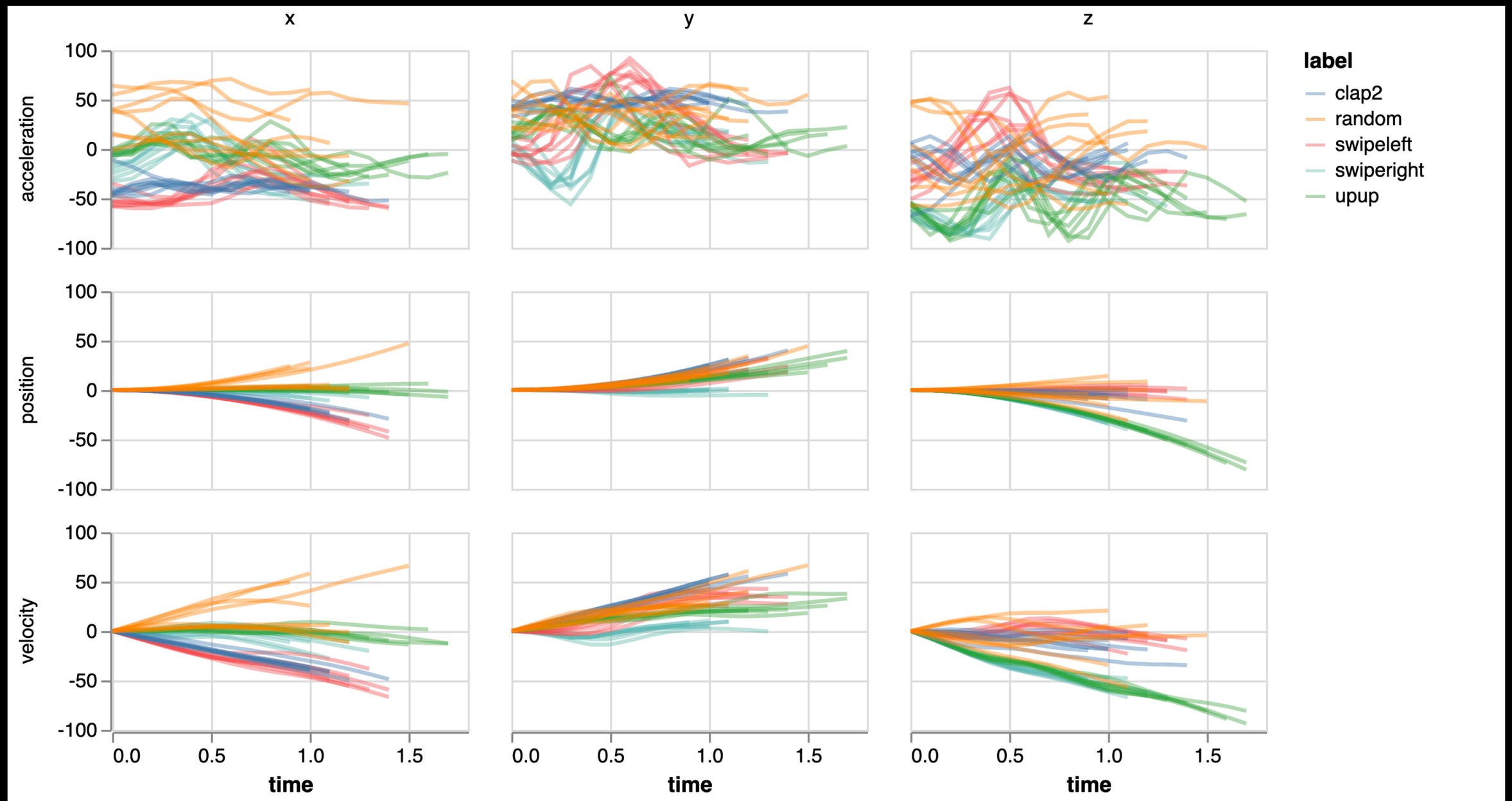
https://www.nearform.com/blog/running-tensorflow-lite-on-nodewatch-bangle-js/



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nodewatch.dev

banglejs.com