# Karim Bouanane

Junior engineer in embedded software development.
With a professional experience of 6 months in France.

## CONTACT

**Address**
Morocco, Fez

**Phone**
(+212) 6 22 11 85 80

**E-mail**
karim.bouanane@keemail.me

**LinkedIn**
karim-bouanane

**GitHub**
karim-bouanane

## LANGUAGES

English     (Technical)
French      (Bilingual)
Arabic      (Native)

## SKILLS

Programming Languages
- Assembly, C, Embedded C, C++, Python, Java, VHDL

Communication Protocols
- UART, I2C, SPI

Debugging Tools
- STM32CubeIDE Debugger, USART Logging, Logic Analyzer, Oscilloscope

Softwares
- KiCAD,
- TouchGFX, Git, Vivado
- VS Code, Atmel Studio
- STM32Cube, Keil uVision

Operating Systems
- Linux, Windows

Embedded Platforms
- Arduino, STM32, Raspberry, FPGA

## EXTRA ACTIVITIES

5 courses on Youtube
4 times at the 10km race
Trainer of the Robotics Club
Member of a volunteer Club

## EDUCATION

**2018-09 -** E.N.S.I.A.S Engineering School **:** Embedded Systems **- Rabat**
2022-09 National School of Computer Science and Systems Analysis (E.N.S.I.A.S)

**2016-09 -** Preparatory Classes : Mathematics and Physics **-** Fez
**2018-09** *CPGE - Lycée Moulay Idriss*

## PROFESSIONAL EXPERIENCES

- End of studies internship: CubeSat Nanosatellite|**C.S.U**|**France    - 05/2022 (6 mo**nths**)**
Realisation of sensor drivers for the ADCS board, in compliance with the CNES standards. The testing and validation phases were also carried out. Project description.
tools **- SW:** *STM32CubeIDE,* SonarQube, Git. **HW:** *STM32F1, Accelero, Magneto, Gyro, IMU*

- 2nd year internship: e-health device|**ENSIAS**|**Rabat, M**orocco    **- 07/2021 (3 mo**nths**)**
Realisation of a graphical user interface displaying different health indicators on a TFT LCD screen controlled by STM32. (see Github)
tools **- SW:** *C, C++, STM32CubeIDE, TouchGFX*. **HW:** *STM32F429D, LCD TFT,* sensors.

- Tutor for Moroccan students in France|Remotely            **- 05/2021 (**2 years**)**
Carrying out academic projects on Linux, KiCAD, C, C++, Assembly x86,Java, Python, Flask, AI in search algorithms.

## PERSONAL PROJECTS

- Africa-wide competition: AMSA edition 6            **- 10/2021 (2 mo**nths**)**
Finalist team  with a prototype system for pothole detection.
tools **- SW:** *Python, NodeJS*. **HW:** *GPS ublox, Raspberry Pi 3B,* USB *Camera, modem 4G.*

- **GPS/GSM tracker**            **- 01/2021 (4 mo**nths**)**
Realisation of a position tracking system for vehicles. (see Github)
tools **- SW:** *C++,* Embedded *C, Atmel studio, Logic Salae, u-center ublox, NodeJS, HTML, CSS*. **HW:** Logic analyzer, *Arduino Nano, GPS ublox M8030, A9 GSM/GPRS.*

- Arduino Nano PCB design            **- 11/2020 (2 mo**nths**)**
Designing a custom 2-layer Arduino Nano circuit board using the KiCad tool. (see Github)
tools **- SW:** *KiCAD*. **HW:** *Atmega328p.*

## ACADEMIC PROJECTS

- **Compil**er of a custom programming language            **- 02/2021 (1 mo**nth**)**
Development of a lexical and syntax analyzer of a new custom programming language. (see Github)
tools **- SW:** *C, Visual studio code, GitHub.*

- Two wheeled self-balancing robot            **- 03/2020 (3 mo**nths**)**
End of the second year project : designing a self-balancing robot using the P.I.D control algorithm.
tools **- SW:** *C, Arduino IDE.* **HW:** *Arduino UNO, Accel & Gyro MPU6050,* Stepper motor.

## CERTIFICATIONS

- C++ ,  Python ,  IoT ,  IoT & Cloud ,  Raspberry Pi ,  Arduino ,  Linux