

# BARKOUM BETRA FELIX

## Seeking six month Electronics, Embedded Systems & Telecommunications Engineer Internship

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in https://linkedin.com/in/felix-barkoum-betra-bbb12a123    https://github.com/felixcamer

## EXPERIENCES

### Freelance Embedded System Engineer

June 2020 – ONGOING    Shanghai, China



Shanghai Nile Intelligent Technology Co. Ltd

- Signal processing experience using MATLAB.
- Digital signal processing algorithms: Implementation of digital filters in C using microcontrollers STM32 & NRF51822.
- Analog and Digital circuit design.

### Tutor

October 2021 – August 2022    Toulouse, France



Faculty of Science and Engineering, Paul Sabatier University (UT3)

- Helping L1 & L2 students in programming ( C/C++, Python ) & mathematics.

### Embedded System Engineering Intern

April 2019 – September 2020    Shanghai, China



Shanghai Nile Intelligent Technology Co. Ltd

- Analog and Digital circuit design using altium designer
- STM32 & Nrf51822 programming experience.
- Simulation of analog circuit experience using LTspice.

## PROJECTS



Paul Sabatier University-Toulouse 3 (UT3)

October 2021 - January 2022    Toulouse, France

- Programming a Graphical User Interface using MATLAB to simulate numerical methods for erbium-doped optical fiber amplifiers.
  - The user can choose different types of optical fibers, the pumping technique, set the pump and input signal power, and compare different numerical techniques of optical amplifier modeling.
- Implementation of 8 bits microprocessor in VHDL.  
The following modules were implemented:
  - micro-instruction module, program counter module
  - instruction register module, accumulators ( A and B )
  - input & output register unit.



University of Shanghai for Science and Technology (USST)

October 2020 - January 2021    Shanghai

- Complete development of a physiological signal acquisition board:
  - Hardware : PCB design including: TFT LCD, BLE, STM32, MAX30100, ADS1292R, etc.
  - software: FIR, IIR algorithms, digital signal processing.

## EDUCATION

### MSc. in Electronics, Embedded Systems & Telecommunications

2021 – ONGOING    UT3, Toulouse, France

main courses :

- Electronic of Telecommunication.
- Programming in VHDL & C etc.

### MSc. in Instrument Science & Technology

2020 – ONGOING    USST, Shanghai, China

- Full scholarship

main courses :

- Virtual & Intelligent Instrument Technology (Labview)
- FPGA (Verilog)
- Test System Application & Design.

### BSc. in Telecommunications ( GPA: 3.86 top 2% of the Program)

2016-2020    USST, Shanghai, China

- Full scholarship

main courses :

- STM32 & 8051 Microcontroller.
- Telecommunication Networks
- Electronic Circuits & VHDL.

### Training

2015-2016    Tongji University, China

- Full scholarship.

main courses :

- Chinese Language.
- Mathematics & Physics.

### A' levels in electronics ( with distinction)

2014-2015    Cameroon

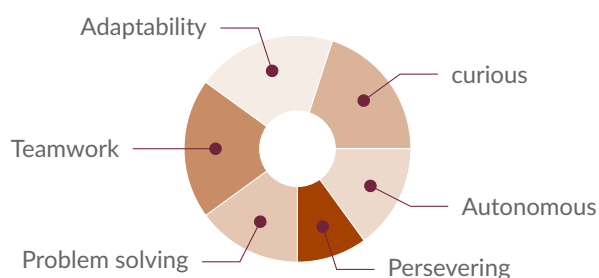
## LANGUAGES



French ●●●●●●●●  
English ●●●●●●●●  
Chinese ●●●●●●●●

- Implementation of artificial intelligence (MLP) on FPGA z7020 board: the system recognizes the numerical digits ranging from 0 to 9.

## SOFT SKILLS



## HARD SKILLS

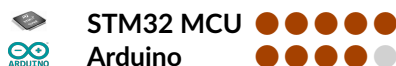
### Programming Languages :



### Software :



### Hardware :



## PUBLICATIONS

- Wearable IoT based Smart Ambient Observation System (SABOS), third author, IEEE Sensors Journal. Link: <https://ieeexplore.ieee.org/document/9486939?source=authoralert>
- A Low Complex IoT-Based Systolic Peak Detection Algorithm for Healthcare: Under review, First author, IEEE IoT. A new systolic peak detection algorithm was developed with better result than existing methods.

## CERTIFICATIONS

- C++ programming
- Asia Mathematical Contest Modelling

## HOBBIES

Football Travelling Swimming

## REFEREES

### Prof. Jean Guy TARTARIN

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