BARKOUM BETRA FELIX

Seeking six month Electronics, Embedded Systems & Telecommunications Engineer Intership

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

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 Microcontrollers.
- Telecommunication Networks
- Electronic Circuits & VHDL.

Training

📅 2015-2016   📍 Tongji University, China

- Full scholarship.

main courses :

- Chinese Language.
- Mathematics & Physics.
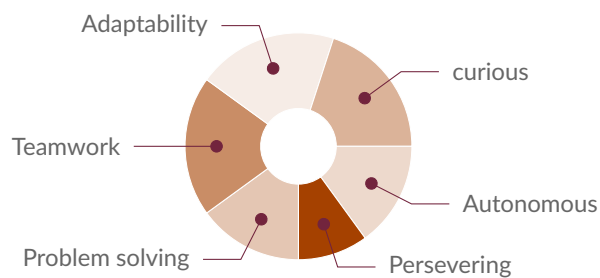
A' levels in electronics (with distinction)

📅 2014-2015   📍 Cameroon

LANGUAGES

🇫🇷 French ●●●●●
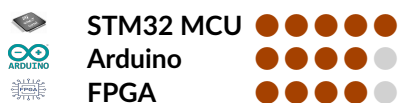🇬🇧 English ●●●●○
🇨🇳 Chinese ●●●●○

SOFT SKILLS

Adaptability · curious · Teamwork · Autonomous · Problem solving · Persevering

HARD SKILLS

Programming Languages :

- C Language ●●●●●
- C++ Language ●●●●●
- Matlab ●●●●●
- VHDL ●●●●○
- Verilog ●●●●○
- Labview ●●●○○

Software :

- Altium Designer ●●●●○
- Vivado ●●●○○
- Quartus ●●●○○

Hardware :

- STM32 MCU ●●●●●
- Arduino ●●●●○
- FPGA ●●●●○

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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