

BARKOUM BETRA FELIX

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EXPERIENCE

Tutor with the Faculty of Science and Engineering, Paul Sabatier University

October 2021 – August 2022 Toulouse, France

- Helping first and second grade student in programming (C/C++, Python) and mathematic .

Online Part-time Job with SHANGHAI NILE INTELLIGENT TECHNOLOGY CO.LTD, Shanghai, China

June 2020 – Present Shanghai, China

- Digital signal processing (ECG, PPG) using MATLAB.
- Implementation of algorithms using MATLAB.
- Hardware validation on stm32 and nrf51822
- Design of analog electronic circuits (ECG and EEG sensor circuits, analog filters, etc.).

Internship with SHANGHAI NILE INTELLIGENT TECHNOLOGY CO.LTD, Shanghai, China

April 2019 – September 2020 Shanghai, China

- Analog circuits design
- Using C language in Embedded system boards based on STM32 MCU
- Simulation of analog front-end electrocardiogram data acquisition circuit using LTSPICE software.

PROJECTS

Project - University of Paul Sabatier(UT3)

October 2021 - January 2022 Toulouse, France

- Implementation on MATLAB of a graphical interface to simulate numerical methods for optical fiber Erbium doped.
- Implementation of 8 bits Micro controller using VHDL

Projcet - Shanghai University of Science and Technology (USST)

Sept 2020 – June 2021 Shanghai, China

- Complete development of a physiological signal acquisition device (PCB, optical detector, stm32 micro-controller, signal processing, Bluetooth etc.)
- Complete development of a Play Brick Breaker video game in C++
- Implementation of artificial intelligence (Multi layer perceptron) on FPGA.
The system is able to recognize through a camera, the numerical digits ranging from 0 to 9. The system is built on Zybo z7020 board.

SKILLS

- Programming in C/C++, VHDL, java et Python.
- Modeling of signal processing algorithms.
- Design of digital electronic circuits .
- Research & Development

EDUCATION

Master of Electronics, Embedded System and Telecommunication

2021 – present UT3, Toulouse, France

Master of Instrument Science and Technology

2020 –2023 USST, Shanghai, China

Bachelor of Telecommunication Engineering

2016-2020 USST, Shanghai, China

Training: Chinese Language, Engineering's Mathematics and Physics

2015-2016 Tongji University, China

TECHNICAL SKILLS

FPGA STM32 nRf51 Arduino
PCB C/C++ & Labview keil
Proteus & Altium Designer
MATLAB & Python VHDL & Verilog
Vivado & Quartus LaTeX java

LANGUAGES

French
English
Chinese



HOBBIES

Football Travelling Swimming

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: In process, First author, IEEE IoT.

CERTIFICATIONS

- C++ programming
- Asia Mathematical Contest Modelling