

Michael Christolin

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ELECTRICAL ENGINEER | EMBEDDED SYSTEMS | IoT & AUTOMATION

Senior undergraduate (B.S./M.S. Combined Program, Electrical Engineering – FAU) with hands-on experience in embedded systems, IoT devices, and hardware prototyping. Former professor with a Master's in Leadership & Management, bringing strong technical, teaching, and team leadership skills.

EDUCATION

Florida Atlantic University (FAU) – Boca Raton, FL	Jan 2024 – Dec 2025 (Expected)
<i>B.S. in Electrical Engineering (Combined B.S./M.S. Program) GPA: 3.64/4.00</i>	
Broward College (BC) – Coconut Creek, FL	Sept 2021 – Dec 2023
<i>Pre-Engineering, Electrical Engineering Track GPA: 3.71/4.00</i>	
Université Chretienne du Nord d'Haiti (UCNH) – Haiti	
<i>M.S. in Leadership & Management</i>	 Sept 2016 – May 2018 B.A. in Music Sept 2009 – May 2013

RELEVANT SKILLS

Embedded Systems: Arduino, ESP32, Raspberry Pi, real-time control, sensor interfacing

Programming: C/C++, Python, MATLAB, HTML/CSS/JS, Arduino IDE, VHDL, Verilog, Assembly (basic)

Hardware: PCB design (EasyEDA, KiCad), soldering, breadboarding/circuit prototyping, FPGA, power regulation

Tools: LTspice, PSpice, Keysight ADS, MATLAB/Simulink, Oscilloscope, multimeter, function generator...

Soft Skills: Leadership, teamwork, communication, technical documentation, teaching & mentorship

PROJECT EXPERIENCE

Smart Self-Cleaning Cat Litter Box (Senior Design) – Team Lead

- ESP32 system with load cell, PIR, servo-driven rake, and TFT/OLED interface. Led 5-member team.

Smart Door Lock System (Embedded Systems Class Project) – Team Lead

- Designed keypad, LCD, and ESP32-CAM web-controlled lock. Managed integration and presentation, improved security with multi-auth methods.

3-Stage Analog Audio Amplifier (BJT-Based)

- Built BJT-based amplifier (differential, CE gain, class AB output). Simulated in LTspice/ADS; validated with oscilloscope at multiple frequencies.

BLE MIDI Controller (ESP32)

- Developed wireless MIDI controller with 12 buttons, octave shift, and joystick X/Y. Implemented real-time BLE for low-latency performance.

Addressable LED Matrix Sign – Web-Controlled (ESP8266)

- Created ESP8266-based Wi-Fi sign with WS2812B LEDs. Hosted web server for same-network message input and real-time scrolling display.

Additional projects: ESP32 FM Radio, Wireless Weather Station, 4-Bit ALU (Arduino Based).

PROFESSIONAL & LEADERSHIP EXPERIENCE

Teaching Assistant – Kelly Education, U.S. Public High Schools **2021 – 2022**

- Assisted classroom teachers in STEM and other high school general education subjects.

Professor – Université d'État d'Haïti – Campus Henry Christoph (UEH), Limonade **2017 – 2020**

- Taught undergraduate courses in Arts, Music Harmony and Composition, and leadership.

Professor – Université Chretienne du Nord d'Haiti (UCNH), d'Haïti **2013 – 2020**

- Taught and mentored students in leadership, music technology, harmony and composition.

Music Director – HEBC, DFC and/or other Churches **(10+ years)**

- Directed choirs, and worship teams; led rehearsals and coordinated performances.

LANGUAGES

English (Fluent) | French (Fluent) | Haitian Creole (Native)

REFERENCES

Dr. Bassem A. Alhalabi

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