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Miles Osborne

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EDUCATION

Embry-Riddle Aeronautical University **May 2023**
Major: Software Engineering   **GPA:** 3.421 *Daytona Beach, FL*
Relevant Coursework: Microprocessor Systems, Digital Circuit Design, Operating Systems

WORK EXPERIENCE

Computer Lab Assistant   **Embry-Riddle Aeronautical University**   **September 2018 – August 2020**
- Maintaining & troubleshooting computer stations and devices
- Responsible for lab cleanliness and safety
- Provided technical assistance to students working on projects

CAMPUS INVOLVEMENT

Spectre, Software Lead   **Experimental Rocket Propulsion Lab (ERPL)**   **January 2020 – Present**
- Leading development of active stabilization unit on amateur experimental rocket
- Teaching new members fundamentals of software development process
- Developing API for servo control using an Arduino Mega2560
- Designing Arduino shield to interface flight computer with peripherals

SOFTWARE PROJECTS

Personal Website: milesosborne.com (for additional information and projects)

STM32F4 Macro Keypad **August 2021 – Present**
- Building a 4x4 mechanical keypad using a STM32F4 MCU
- Implementing USB protocol with libopencm3 framework
- Utilizing EEPROM for user-defined macros

STM32F4 MCU Drivers **March 2021 – Present**
- Developed low level drivers for STM32F4 MCU
- Currently offers support for I2C, SPI, and GPIO peripherals
- Developing interrupt-based api for serial protocols

Arduino Lightsaber **May 2020 – June 2020**
- Built replica model lightsaber using an Arduino Nano Every MCU
- Implemented on-the-fly color changing with 2x ws281wb LED strips
- Utilized Adafruit Audio FX Sound Board for user-programmable sound fonts

ADDITIONAL EXPERIENCE

- **Instructor (Summer 2021):** Taught C programming to the members of ERPL and Spectre
- **Server Admin (February 2021):** Built Linux server running a self-hosted instance of GitLab for Spectre

SKILLS

- **Software:** C, Embedded C, C++, Python
- **Hardware:** I2C, SPI, USB
- **Web Development:** HTML, CSS, Javascript
- **CAD/Design:** Autodesk Fusion 360, KiCad