Logan Bjork

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EDUCATION

University of Florida   Gainesville, FL
B.S. in Computer Science - GPA: 3.78/4.00 - Dean's List   *July 2023 – December 2026*
In-Progress Coursework: Embedded Systems, Penetration Testing (Ethical Hacking)

Completed Coursework: Operating Systems, Computer Organization, Data Structures and Algorithms

EXPERIENCE AND INVOLVEMENT

Audio Engineering Society   Dec. 2025 - Present
Graphic Design Lead   *Gainesville, FL*
- **Conceptualized and executed** visual branding for club paraphernalia, including digital advertisements, event posters, and apparel, ensuring a cohesive identity across all platforms
- **Effectively communicated** with other officers and leadership, tracking and guaranteeing **fixed deadlines** while integrating art in other areas of the club

CISE Community Lead   Feb. 2024 - Sep. 2025
Community Lead   *Gainesville, FL*
- Facilitated a technical learning environment for a student-run community of **600+ active members**, ensuring high engagement and adherence to community and University of Florida guidelines
- **Collaborated with peer mentors** to organize study sessions and review workshops
- **Provided help** with **core CISE** coursework, delivering clear verbal and visual explanations for operating system and data structure concepts

PROJECTS

Pico Drums | Repository | *Raspberry Pi Pico, C, TinyUSB*   Jan. 2026 - Present
- Created a **velocity sensitive**, **real-time** MIDI drum-kit with the **Raspberry Pi Pico** and **C**
- Engineered force-sensitivity through the use of Raspberry Pi ADCs, translating and clamping analog signals into a **35–115 velocity range**
- Implemented an **interrupt** to allow **real-time state-changes** of MIDI notes within messages, mimicking an **analog foot-switch** on a cymbal to register an **open or closed state**
- Developed a **4-to-1** multiplexer via a quad analog switch to expand usable ADCs from **3 to 9**

Motor Accessible Controller | Repository | *Raspberry Pi Pico, C, Blender*   Jan. 2026
- **Led a team** of **4** hardware and software engineers for SwampHacks XI, delegating responsibilities such as research, circuitry, and firmware while ensuring consistent **hourly updates** on progress between both teams
- Developed **C** firmware to process and serially debug real-time joystick, button, and analog sensor inputs
- Designed accessible hardware through use of intentional joystick deadzones (**2000–3000** range) and voltage-limited piezoelectric sensors (**0–3.3V**) to behave as a button replacement

Simple WAV Audio Player | Repository | *C, ALSA*   Jan. 2026
- Built a **C**-based WAV audio player and creator for operating systems based on the **Linux kernel**
- Implemented .WAV file **creation and playback** through low-level header manipulation and audio data parsing
- Utilized the **native Linux ALSA kernel API** to interface directly with sound card drivers for low-latency audio processing and playback

RanDrum | Repository | *Rust, midly, CLAP*   Dec. 2025
- Designed a **Rust-based CLI tool** to **automate** drum groove creation through randomized MIDI file merging
- Implemented recursive directory walking for **up to 6 user-selected instruments** to dynamically combine tracks into a **single output**
- Utilized the midly crate to handle low-level MIDI message parsing and serialization, ensuring robust file output

TECHNICAL SKILLS

Languages: C, Rust, C++, Python, ARM Assembly, Java, HTML/CSS
Tools and Methodologies: Git, Linux (Arch, Ubuntu, Kali), Neovim, VS Code, Bash/Shell, gdb, Raspberry Pi, Arduino, Visual Studio, AGILE, Blender, Figma
Foreign Languages: Italian (Conversational)