

JOSHUA BRUNK

Gainesville, Florida | <https://github.com/LunaVoid> | [linkedin.com/in/joshuabrunk](https://www.linkedin.com/in/joshuabrunk)

CAREER OBJECTIVE

CS senior (3.5 GPA) with leadership experience as **Technical Lead** of **\$5K UF Innovate funded startup** and **Research Project Lead** in AI/ML systems at **METL Lab**. Seeking software engineering roles in backend systems, AI/ML engineering, or full-stack development.

EDUCATION

Bachelor of Science, Computer Science

Aug. 2023 – Fall 2026

University of Florida - 3.5/4.0 GPA

Gainesville, FL

Relevant Coursework: Data Structures and Algorithms, Operating Systems, Computer Organization(Assembly)

PROFESSIONAL EXPERIENCE

Research Project Lead - Memory Box

Jun. 2025 – Present

UF Media Effects and Technology (METL) (University of Florida)

Gainesville, Florida

- Built **Multimodal Memory Recall AI Assistant** using **OpenRouter Function Calling**, **RAG pipeline** with **Qdrant Vector Database**, **Qwen embeddings**, and **Whisper STT/SpeechRecognition interface**.
- Implemented **Python facial recognition** and image detection with **SQLite conversation history**, enabling dementia patients to recall memories through photo identification and contextual assistance.

Technical Lead

Sep 2025 – Jan 2026

Lens Link (UF Innovate Funded Startup (5K grant))

Gainesville, Florida

- Architected scalable eyewear marketplace serving 3+ vendors using **React Native**, **Medusa**, **Shopify API** with **CI/CD workflows** **reducing deployment time 15%**. Led 4-person team through agile development and code reviews.

Web Developer and Systems Administration

August. 2023 – Present

Hinkley Center For Solid and Hazardous Waste (University of Florida)

Gainesville, Florida

- Systems Administration: Architected multi-environment WordPress migration with shared-database strategy (table prefixes), automated deployment workflows, and MySQL table operations. Increased site traffic 42.8% and automated 120+ PDF collection.
- Built ADA compliance pipeline integrating VeraPDF verification and AI-powered alt-text generation (Mistral/VLLM) to automate accessibility standards for web and PDF documents.

PROJECTS

CarryR: ESP-NOW Distributed Node Network | C++, Python (Bleak) BLE, FastAPI, ESP32-S3, React (Frontend) Jan - May 2026

- Implemented an **ESP32 firmware** to receive bluetooth binary messages from the backend and transmit them over ESP-NOW through a node network with **250+ meter transmission range**, supporting **3-16 node networks**.
- Developed a **Python Bleak/FastAPI** backend to receive and send flood messages over our node network and properly inform the frontend of received messages.

Second By Second | Swift, XCode | <https://apps.apple.com/us/app/second-by-second/id6757405910>

Jan 2026

- Used **Swift CoreData** and **Swift AVFoundation** to store video data and provide ease of access for video manipulation.

GatorTrader: | React/React-Router, JavaScript, Python, Flask, PostgreSQL, Docker Compose, Git

Jan - May 2025

- Led 4-person team** architecting full-stack financial education platform with paper trading and portfolio analytics. Backend created with **Flask and PostgreSQL** implementing **JWT authentication and data hashing** for security.
- Created deployment pipeline using **Docker and Docker Compose** to deploy onto **Hetzner VPS**.

WADFS: Userspace File System for WAD Files | C++, FUSE, Linux, WAD

March - May 2025

- Implemented a **C++ library** to parse DOOM WAD headers, descriptors, and lumps, to map into an **in-memory directory tree**.
- Developed a **FUSE-based daemon** (`wadfs`) to mount WAD archives as a **POSIX filesystem** supporting read/write.
- Implemented standard **POSIX file operations** (`mkdir`, `touch`, `write`) for WAD archive modification.

TECHNICAL SKILLS

Languages: Python, C++, JavaScript/TypeScript, SQL, Swift, HTML/CSS, PHP

Frameworks: React/React Native, Node.js, Flask, FastAPI, Crow (C++), SwiftUI, Beautiful Soup

Tools/DevOps: Linux, Docker, Git, PostgreSQL, SQLite, Qdrant, Firebase, FUSE, Valgrind, Ollama, Coolify

Cloud Providers: Hetzner VPS, Digital Ocean, Netcup