

Joshua Bandy

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EDUCATION

Bachelor of Science in Computer Science

University of Central Florida

August 2023 - December 2025

Orlando, FL

EXPERIENCE

Florida Space Institute

May 2025 - December 2025

Student Robotics Researcher (Senior Design)

Orlando, FL

- Engineered a modular, distributed control system for a robotic arm on **Raspberry Pi 5**, enabling independent operation and direct UI command reception.
- Designed **RESTful APIs** and integrated with **ROS2** for robust command dispatch to hardware, including custom parsing for joint and autonomy routines.
- Implemented inter-server **HTTP/TCP** communication with dynamic service discovery to facilitate collaborative robotic tasks.
- Enhanced the reliability and scalability of a complex, inherited system by implementing **agile** development cycles and applying core embedded software principles.

Sarasota County Government

January 2021 - June 2021

Software Engineer Intern

Sarasota, FL

- Optimized **SQL** queries to extract operational data, reducing report generation time and improving data accuracy for financial stakeholders.
- Authored comprehensive documentation for internal project workflows, creating a knowledge base that streamlined the onboarding process for future team members.
- Collaborated with senior developers to audit database structures, identifying inconsistencies and assisting in the migration of legacy records.

PROJECTS

MediaShelf

June 2025 - Present

Full Stack Developer

Orlando, FL

- Developed a full-stack inventory system using **Next.js** and **Tailwind CSS**, implementing dynamic filtering and server-side rendering for optimal performance.
- Secured the **RESTful API** using **JWT** authentication and middleware validation to protect user data and prevent unauthorized modifications.
- Designed a flexible **NoSQL** schema with **Mongoose**, utilizing polymorphic associations to efficiently store diverse media types (Books, Games, Movies) in a single collection.

Campus Connect

April 2025 - May 2025

Full Stack Developer

Orlando, FL

- Architected a lightweight event platform on a **LAMP** stack, utilizing vanilla **JavaScript** to manage DOM manipulation without the overhead of heavy frontend frameworks.
- Engineered a secure **PHP** backend implementing **prepared statements** and session validation to eliminate SQL injection risks and ensure data integrity.
- Programmed complex backend logic to automate conflict detection, preventing double-booking of venues and enforcing tiered membership permissions for event creation.
- Designed a responsive UI with **Tailwind CSS** and asynchronous data fetching, ensuring a smooth user experience for real-time comment feeds and event updates.

Salvage Financial

February 2025 - May 2025

Full Stack Developer

Orlando, FL

- Engineered a cross-platform **Flutter** application with shared state management, ensuring seamless data synchronization between mobile and web clients.
- Architected a **CI/CD** pipeline using **GitHub Actions**, automating testing and linting to cut deployment turnaround time by 60%.
- Designed a scalable backend architecture using **Node.js** and **MongoDB**, implementing efficient indexing strategies to handle high-volume transaction data.

SKILLS

Languages C | C++ | C# | Python | Java | JavaScript | TypeScript | HTML | CSS | SQL | PHP | Bash

Frameworks React | Next.js | Node.js | Express.js | Tailwind CSS | FastAPI | Flutter

Tools & Platforms Git | GitHub | ROS2 | Linux | DigitalOcean | MongoDB | Postman | Unity | Android Studio | VSCode