

Allison Brown

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EDUCATION

Florida Gulf Coast University - Fort Myers, FL

Expected May 2027

B.S. Software Engineering | GPA: 3.79 | Dean's List 4× | President's List 2× | First-Generation Student

Relevant Coursework: Data Structures & Algs., Computer Security, Systems Admin. & Prog., Cloud Computing Data Engineering

TECHNICAL SKILLS

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

Frameworks & Tools: ArduPilot, MAVLink, Gazebo, MAVProxy, Selenium WebDriver, TestNG, Azure/AWS, Git

Concepts: RF Communication Systems, Secure UAV Communications, Machine Learning, REST API Design, Cryptographic Hashing, Digital Twin Modeling, Event-Driven Architecture, Agile/Scrum

EXPERIENCE

Student Intern - *Homeland Security Investigations (HSI)* | Fort Myers, FL

January 2026 – Present

- Shadowed HSI's Technical Enforcement Office, gaining hands-on exposure to RF-based surveillance and electronic monitoring operations.
- Conducted digital forensic analysis using Cellebrite, GrayKey, and Griffeye on mobile device evidence across 10+ federal cases.
- Gained end-to-end exposure to a live Title III wiretap investigation, from minimization procedures through live takedown operations.
- Participated in federal search warrant execution and SRT briefings, observing arrest operations and chain of custody protocols firsthand.

Software Developer - *BoomBox Inc.* | Fort Myers, FL

September 2025 – July 2026

- Developed React Native components for a cross-platform music discovery app, integrating 8+ REST APIs to enable data-driven features.
- Built and redesigned the onboarding flow and settings page, adding light/dark mode and Apple Music integration.
- Reduced feature scope ahead of beta to meet sprint deadline, delivering a clean redesign on time and deferring unfinished functionality.

PROJECTS

Drone Security Simulation - *Python, ArduPilot SITL, MAVLink, Gazebo, MAVProxy*

February - April 2025

- Simulated RF jamming attacks across 3 adversarial scenarios in ArduPilot SITL + Gazebo to identify UAV communication vulnerabilities.
- Developed a Python frequency-hopping defense algorithm to dynamically switch channels to evade active jamming, validated in simulation.
- Programmed a MAVLink heartbeat monitor with a 5-second failsafe that autonomously issues LAND commands on signal loss.
- Authored a technical report on attack vectors, countermeasures, and resilience analysis for secure UAV communications.

DisasterAssistance.gov: Automated Test Suite - *Java, Selenium WebDriver, TestNG, Maven*

March 2026

- Built a Selenium/TestNG automated test suite with 8 test classes and 40 tests validating key user flows on a live US government website.
- Authored 4 Java test classes covering homepage content, navigation, search, and FAQ using real Chrome WebDriver interactions.
- Designed an object-oriented test architecture using class inheritance and testng.xml sequencing to eliminate boilerplate across all 40 tests.
- Verified navigation integrity, form behavior, sign-in redirect flows, and required federal banner compliance across all tested user flows.

Road Intelligence Backend - *Python, Azure Functions, ML, REST APIs, Digital Twin*

August – December 2025

- Built an event-driven Azure backend integrating live FDOT sensor data into Digital Twin road-segment models using 7 Azure Functions.
- Trained ML models to forecast pavement conditions and traffic trends, exposed via REST APIs for downstream reporting systems.
- Delivered a complete system from project inception through deployment covering pipeline design, ML integration, and API development.

AI-Powered Posture Coach - *Python, MediaPipe, YOLOv11, Google ADK, Google Cloud Logging*

September 2025

- Built a real-time computer vision pipeline using MediaPipe and YOLOv11 for posture and phone detection, developed in a 4-person team.
- Deployed 3 Google ADK agents for posture analysis, distraction detection, and noise monitoring, streaming 38K+ rows to Cloud Logging.
- Placed Top 11 overall and 2nd in the Google Cloud ADK challenge among 1,400+ hackers at ShellHacks 2025 (FIU).

LEADERSHIP & ACTIVITIES

President - *FGCU Computer Science & Software Engineering Club (CSSEC)*

January 2024 – Present

- Promoted from Marketing Coordinator to President, leading a 100+ member organization with 12–14 workshops and panels per semester.
- Organized career events featuring Microsoft, Hertz, Arthrex, and more, consistently engaging 50–60 students per session.
- Built mentorship programs and technical workshops to create a collaborative, growth focused community for CS/SE students.

Hackathon Organizer - *FGCU EagleHacks*

Spring 2024 – Present

- Led planning and logistics for 3 annual iterations of EagleHacks, growing attendance to 100+ participants.
- Secured \$23K+ in sponsorships from seven corporate partners, leading sponsor meetings and judge briefings each year.
- Coordinated with university and UPD to secure overnight access and open EagleHacks to external participants for the first time.
- Managed budgeting, vendor orders, prize procurement, and merchandise production while mentoring participants throughout.